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ABSTRACT

Extensive interviews were conducted with 12 young adults with learning disabilities who were successful at the college level, as well as with their parents, along with a thorough review of available school records, in order to examine how well high-ability students with learning disabilities succeed in academic environments. Most of the participants had been identified as having a learning disability late in their academic careers, suggesting their high ability may have masked some manifestations of learning disability. Students' mixed academic achievements often hindered their inclusion in gifted education programs. Reports of positive school experiences primarily centered around individual teacher support. Students reported many negative school experiences such as social problems, difficulty with teachers, and frustration with certain academic areas. Parents often reported that school systems "did not know what to do" with their children. However, students recalled very positive out-of-school experiences which enabled them to survive and constructively adapt their negative school experiences, resulting in positive personal attitudes. Positive personal characteristics in this group included high motivation, a high level of "task commitment," perseverance, and endurance. A major finding was the positive impact of the services provided by the University of Connecticut Program for Students with Learning Disabilities. The important influence of a learning specialist at the college level emerged as a critical factor in the academic success of the students participating in the study. Executive Summary is also published separately. (Contains approximately 150 references.) (Author/DB)

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ABSTRACT

During the last decade, increasing attention has been given to the perplexing problem of high ability students who also have learning disabilities. Although the literature has addressed this topic, problems still exist regarding the identification and provision of support services and programs for this population. To investigate how well high ability students with learning disabilities succeed in academic environments, The National Research Center on the Gifted and Talented at The University of Connecticut studied twelve young adults with disabilities who were successful at the college level. Extensive interviews with these young adults and their parents, as well as a thorough review of available school records, provided a fascinating portrait of the challenges and problems faced by high ability students with learning disabilities.

The majority of participants in this study were identified as having a learning disability later in their academic careers. This is consistent with previous findings in the literature which suggest that the high abilities of these students may mask certain manifestations of learning disabilities. The mixed academic achievements of these students hindered their early identification as having a learning disability and prevented several students from inclusion in a gifted education program despite high IQ test scores. Three students in this study were nominated for gifted programs, but did not receive services because they had low test scores in some areas.

Reports of positive school experiences primarily centered around individual teacher support. Both students and parents recalled specific teachers who became interested in the student or made appropriate academic accommodations during their educational experience such as: providing extra time on tests, providing instruction in learning strategies, taking time to listen, and challenging the student in ways others had not.

Students reported negative school experiences and difficulties which are typically associated with learning disabilities such as social problems, difficulty with teachers, and frustration with certain academic areas. These students generally stated that their talents were not addressed by the school system they attended. Some also indicated that having a learning disability was considered by school personnel as synonymous with below average ability. Parents often reported that school systems simply "did not know what to do" with their children. This was supported by numerous accounts of negative school experiences related by students and verified by parents.

These negative school experiences occurred within the context of very positive out-of-school experiences, talents in another place, which provided participants of this study with an opportunity to distinguish between positive life experiences and negative school experiences. These positive experiences outside of school enabled participants to survive and even constructively adapt their negative school experiences, resulting in positive

personal attitudes that may have enabled them to succeed later in school. Many of these students excelled in athletics or sports; many had hobbies or passionate interests outside of school. Many had spatial strengths that were not recognized, rewarded, or nurtured in the schools they attended that emphasized reading, writing, and verbal skills.

Positive personal characteristics were exhibited by this group of high ability students with learning disabilities who succeeded in a university setting. Participants were highly motivated and their constant striving to achieve resulted in success at the university level for most of these individuals. Students displayed sheer determination in accomplishing goals and seemed to possess what Renzulli (1977) has called "task commitment," defined as the energy the individual brings to bear on a specific task. Other characteristics associated with task commitment that were demonstrated by the students in this study included perseverance, endurance, hard work, and dedicated practice.

A major finding which emerged from the interviews was the positive impact of the services provided by The University of Connecticut Program for Students with Learning Disabilities (UPLD). The important influence of a learning specialist at the college level emerged as a critical factor in the academic success of the students participating in the study. Similar to previous elementary and secondary teachers, learning specialists at the postsecondary level provided valuable services. Students reported that learning specialists were particularly helpful with instruction in learning strategies, introducing time management schemes, and directing students to a variety of on-campus resources.

This research on high ability students with learning disabilities has provided a fascinating portrait of the issues that must be addressed if these young adults are to realize their potential. The negative school experiences; the positive personal characteristics; the compensatory strategies necessary for students to be successful; the advocacy necessary from parents, teachers, and, particularly, students themselves; and the university program for students with learning disabilities were all factors in the success of these students.

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EXECUTIVE SUMMARY

Introduction

This study investigated factors that enable some high ability students with learning disabilities to succeed in an academic setting. The study also examined the process of identifying these students as either gifted or learning disabled in elementary or secondary school. Little information exists about the academic experiences of and compensation strategies used by gifted students with learning disabilities who succeed in college. Gifted students with learning disabilities who have successfully enrolled in or completed college were identified and asked to participate in this research. Qualitative methodology, including case studies, open-ended interviews, and document review were used.

Little research has been conducted on gifted students with learning disabilities, although Davis and Rimm (1985) estimated that there are somewhere between 120,000 and 180,000 gifted students with disabilities in American schools. Prater and Minner (1986) suggested that the majority of these students have learning disabilities. Minner (1990) found that classroom teachers, including teachers of gifted students, ". . .may hold some rather stereotypical notions about learning disabled and/or gifted students which, in turn, may cause them not even to consider such children in a program for gifted youngsters" (p. 38). Whitmore and Maker (1985) summarized their analysis of this population in this way:

> Intellectually gifted individuals with specific learning disabilities are the most misjudged, misunderstood, and neglected segment of the student population and the community. Teachers, counselors, and others are inclined to overlook signs of intellectual giftedness and to focus attention on such deficits as poor spelling, reading, and writing. Expectations for academic achievement generally are inaccurate—either too high and unrealistically positive or too low and discouraging of high aspirations. It is not uncommon for gifted students with learning disabilities to be told that college study is inappropriate for them, that professional careers will be unattainable, and that jobs requiring only mechanical or physical abilities are more fitting to their abilities. Without equal opportunity to try, these individuals may be denied access to appropriate educational and professional career opportunities. (p. 204-205)

Although little research exists, many articles and books have been published about gifted students with learning disabilities. Much of what has been written about this population is descriptive, but in one data-based study, Baum and Owen (1988) found that gifted students with learning disabilities had unique characteristics related to persistence and individual interests and possessed lower academic self-efficacy than their peers who have not been identified as gifted with learning disabilities. Self-efficacy, according to Bandura

(1986), is the self-perception that a person can organize and carry out some action. Baum and Owen further found that 36% of the students in their study who had been identified as possessing a learning disability simultaneously demonstrated behaviors associated with giftedness.

Research Design and Methodology

Qualitative methodology was used in this study to investigate subjects' perceptions and experiences which are in turn related to the individual's external behavior, in this instance, overcoming the obstacle of the learning disability. Accordingly, the individual's perceptions are of primary importance in a study of this nature. In order to obtain the most accurate image of the subjects' experiences and perceptions, open-ended questionnaires and in-depth interviews were used to explore the subjects' and their parents' experiences.

Sample

Twelve currently enrolled college or university students or recent graduates who were identified as having a learning disability comprised the sample for this research (see Table 1). These individuals either were identified as having a high IQ in elementary or secondary school, but were not identified as gifted and included in the district gifted program. Information such as IQ and/or achievement tests, outstanding performance in one or more academic areas, teacher nomination, and product information from an academic portfolio was used to document the label of giftedness.

Data Collection

Multiple viewpoints on a phenomenon, or triangulation, allows greater accuracy of interpretation than any of the viewpoints or data sources considered individually (Guba, 1978; Jick, 1983; Van Maanan, 1983). This cross-validation can be achieved by "between-methods" triangulation in which two or more methods of data collection are used. To ensure the highest degree of accuracy possible, data for this study were collected using three methods: records and testing information, written responses to an open-ended questionnaire, and in-depth interviews with each subject and with one of their parents.

The number of interviews conducted was determined when data saturation was reached. Data saturation occurs when the subject can only provide information which has become redundant and does not offer useful reinforcement of information previously collected (Spradley, 1979). The open-ended questionnaire served as a preliminary source of issues to be investigated further during the interviews as well as an additional source of information.

Prior to the initial interview, each subject was provided with a biographical questionnaire and written information about the study and his or her anticipated role in it. Parents and/or teachers were asked to complete a brief written summary of their perceptions of each subject's academic history and the effects of their learning disability and label of giftedness. Each interview session was used to clarify, verify, and expand upon the subject's responses. All interviews were tape-recorded and transcribed and the field notes and observations made by the researcher at the time of the interviews were added to the transcriptions. Interviews and other data collection procedures followed guidelines suggested by Spradley (1979), Strauss (1987), and Strauss and Corbin (1990).

Table 1

Subject Demographic Information

	Demographics			
Subject	Age	Sex	Semester	University Program
Arthur	21	Male	7	Behavioral Psychology
Colin	19	Male	4	Electrical Engineering and Computer Science
Diane	45	Female	Graduate	Ph.D. in Special Education
Evan	21	Male	7	Political Science to Prelaw
Fred	25	Male	B.A. +	Teacher Certification
Forrest	20	Male	4	Education, English
Jake	21	Male	4	Engineering
Joe	20	Male	2	Physics
Kate	20	Female	4	Liberal Arts
Mike	21	Male	3	Liberal Arts
Martin	19	Male	1	Preallied Health
Peggy	20	Female	4	Music

Data Analysis

Data analysis was conducted using techniques designed by Strauss (1987) and Strauss and Corbin (1990). As suggested by these researchers, data analysis coincided with data collection and affected the collection of additional data. Data analysis techniques included the use of a coding paradigm described by Strauss (1987) and Strauss and Corbin (1990) as well as coding suggested by the same researchers including three levels: open coding, axial coding, and selective coding. This coding paradigm results in the formulation of a core category or categories of results.

Results

The findings in this study revolve around the core categories for both participants and parents. Two core categories were found for participants: negative experiences in school and the integration of personal traits; environmental and learned strategies necessary to succeed in school.

Participant Categories

Negative School Experiences

All of the participants recalled negative, and in many cases painful, memories of situations that had occurred during their elementary and secondary school years. It is important to note that these negative school experiences occurred within the context of many positive outside-of-school experiences which provided participants of this study with an opportunity to distinguish between positive life experiences and negative school experiences. *All* of the participants in this study had positive out-of-school experiences which may have enabled them to survive and even constructively adapt their negative school experiences, resulting in positive personal attitudes that may have enabled them to succeed later. Many of these students excelled in athletics or sports; many had hobbies or passionate interests outside of school; many had spatial strengths that were not recognized, rewarded, or nurtured in the schools they attended that emphasized reading, writing, and verbal skills. For many of these students, the discussion of these school memories was troubling and several indicated that they tried never "to think about what happened to them in school." In some cases, they admitted to "blocking out" memories of painful events that they would rather forget, but each was able to "dredge up" these incidents during the course of the interviews. As Joe eloquently summarized:

> I still have a lot of emotion about it. I had a lot of mistreatment. It [this interview] conjures up memories of things that I don't like to meet.

It should be noted that some of the negative school experiences that these students encountered were quite harsh, including: repeated punishment for not completing work on time, retention (repetition) of a grade, placement in a self-contained special education class in which the majority of students were developmentally delayed or had been identified as mentally retarded, and cruel treatment by peers and teachers. In fact, if these and other school experiences were not related over and over by many respondents, one might consider them to be rare, almost accidental happenings. But they were not rare, and indeed, similar experiences were remembered by all of the students in this study, and in almost half the cases painful memories and wounds still remain.

The negative school experiences which had a particular impact on the participants of this study include the following:

Late Identification of a Learning Disability

The majority of the participants were not identified as having a learning disability until middle school, high school, or college, even though most were referred by teachers or parents for testing or various types of assistance because of difficulties encountered in reading or writing in primary or elementary school. Learning problems were evident in these early grades although most students who were referred were not identified as having a learning disability until later in school.

Self-contained Special Education Class

Several of the participants were placed in self-contained special education classes that they perceived were primarily intended for students with mental retardation and students with emotional and behavioral disorders. This experience was traumatic for some of these students. Joe, for instance, indicated that the experience was degrading and he admitted that he had "blocked out that part of his life."

Retention

Half of the participants in this study were retained and had to repeat a grade. This repetition usually occurred because reading or writing skills were not mastered or, in some cases, behavioral problems developed as a result of frustrations faced by the participants. Some were angry about the experience, believing their retention was caused by teachers not recognizing their learning disability, and some accepted what happened with seeming complacency. Diane explains her retention:

> D. I stayed back in 2nd grade—So now, I was both bigger and dumber.

When asked about her reactions to staying back in second grade, Diane displayed anger.

> D. I didn't do anything. I just sat back because I was so angry.
> S. This was your second year in second grade?
> D. Right. I didn't do anything. It was like I sat like this, and when they asked me a question, it was like, "You think I am dumb? I will show you how dumb I am."

Negative Interaction With Certain Teachers

All of the subjects recalled negative experiences with some of their teachers. All could specifically remember at least one teacher and most could remember more than one teacher who had been a negative influence in their schooling. Some teachers denied students the right to special education services guaranteed to them because of their learning disabilities. Other teachers constantly told the participants of this study that they were lazy and could achieve if they worked harder.

Problems With Peers

Most of the respondents cited incidents of problems with their peers that almost always began in the elementary grades and continued throughout school. Peggy explained that by fourth grade the kids had picked up on the fact that she couldn't do her work and "They made up songs about me. At the end of doing all of the times tables, you had to take a thing called 'The Review.' It was flash cards, and it mixed up all the different times tables, and you had to do a certain number of them, and pass the review, and there would be a big thing about, 'so and so has already gotten to the review and so and so did it today.' I never got the review, and there was this song about that 'Peggy will never take the review' made up about halfway through the school year."

Tracked Classes and Lack of Effort in School

Ten of the twelve high ability students in this study had negative opinions about the tracking system formerly used in most of their schools and, in particular, their placement in lower level reading and math groups in the elementary school and low track classes in their high schools, despite their high IQ test scores and apparent ability in some areas. In some instances, their placement in low skills classes resulted in a lack of effort and in negative opinions about themselves. In Mike's words:

> I couldn't do certain things and the teachers were always hounding me and also I kind of got it into my head that I wasn't that smart. Sort of, I don't know, I think I was kept down. Because I think I could have done a lot more, but they would always put me in low groups and things. I was never in the highest reading groups or the spelling groups.

Difficulty in Reading and Writing

The specific nature of the subjects' learning disability, in every case in this study, was related in some way to verbal ability which they perceived to have had a detrimental effect on every aspect of their schooling. All of the subjects mentioned problems with reading and spelling. Diane explained:

> I have a problem with lots of reading. That's always gonna be a problem. I don't have trouble reading, I mean I can read through stuff. It's just running through pages. I mean I can read. I can sit there and read 2 pages or 3 pages and realize that I had no concept of what I put my eyes over in the last 3 or 4 pages so I have to start over. I can do the same pages a long time before I understand what's happening. I can read through math texts, complicated math texts, just as quick as I could read a cheap novel or something. It's just the process of going through the words.

Variability of Special Education (Learning Disability) Programs

Three of the participants identified their learning disability specialist as their greatest positive influence, indicating the many benefits of the program run by these individuals. However, all participants who were involved in school programs for students with learning disabilities indicated a high degree of variation in the quality of their special education/learning disability program. The reasons hypothesized for the differences in quality were numerous, including different teachers each year, no clear program goals, and a lack of a coherent program. Pictures of scattered activities in an unclear, disorganized learning disability program were repeatedly described by most of the respondents who participated in a special program. It should be noted that some of these students participated in programs that had just begun. In some cases the student was put into a program with many students who were perceived to have more serious problems than did the participants of the study. Many of the participants had a difficult time describing what they did in their elementary or high school learning disability program.

Difficulty in Reconciling High Abilities and Learning Disabilities

Most of the participants in this study had difficulty reconciling their high ability with their learning disability. Many were perplexed about how their advanced abilities and their learning disability interacted. Some still believed they were "dumb" because of all of the negative comments made to them throughout their years in school. For example, Evan explained that many of his teachers did not think that he was smart. But when asked if he knew he was smart, Evan replied: "Yeah, I always thought I was." Diane eloquently described how she often felt as if she were two different people in the same body: one who was competent and bright who was inside, and another who blocked the smart person inside from communicating.

Integration of Personal Traits, Environmental Modifications, and Learned Strategies Necessary to Succeed

The second core category which emerged in this study involved the ways that the participants integrated their experiences with their environment, their personal strengths, and various learned strategies they needed to succeed.

Compensation Strategies, Learning Strategies, and Executive Functions

Multiple compensation strategies were employed by all of the participants in this study to succeed in academic settings. All participants attributed their successes in these environments to their ability to use compensation and learning strategies. Learning strategies included but were not limited to: methods of learning to study, note taking, and identifying key points. Compensation strategies included: use of computers, word processors, books on tape, and self-advocacy. Executive functions included planning techniques such as time management, metacognition, and setting work priorities.

While many of the students mentioned multiple learning and compensation strategies, it is clear that each selected the strategies that worked best for him/her. For each participant, an individual system defined by Denckla (1989) as executive function was developed which enabled him/her to succeed using a combination of compensation and learning strategies. For some participants, this system included, but was not limited to: walking or driving someplace several times to make certain that they knew the correct route, organizing their time to find the large blocks they needed to complete their reading, and analyzing their own difficulties to be able to overcome them.

Parental Support

Another area reported by every participant in this study was the pervasive presence of parental support. This support was always given by the mothers of the participants and in about half of the cases the father was also supportive, either providing visible help by being on the sidelines or by providing financial assistance. However, some fathers were totally nonsupportive. The mothers of these students were their primary advocates and demonstrated consistent support in specific ways. These mothers monitored homework, told their children they were smart, selected computers, scheduled and attended teacher conferences, argued with school personnel about class placement and the need for learning disability services, sought information about learning disabilities, took their children for outside-of-school testing, sent them to special camps or private schools, read and checked their papers, and provided constant encouragement and love.

Participation in a University Learning Disability Program

All of the initial participants in this study who were selected because of their participation in UPLD were extremely positive about the effects of their participation in this program. Consistently, they mentioned the study strategies they learned, the support system that was available, and all of the help they received. Participants were also very positive about the continuity in having the same program director. They were uniformly complimentary about their director and her contribution to their successes. Joe summarized the sentiments explained by several participants in the following way:

> It's really nice to have someone up there to bat for you. If I have a problem, it's good to know that I have her out there to handle the problem.

Self-perceived Strength and Future Aspirations

The majority of the participants believe their capacity for hard work is their greatest asset and the data indicate that the constructive adaptation or interpretation of their negative school experiences caused this work ethic to emerge. Each of these students learned how to work hard because of his/her learning disability, as is clear in these representative comments:

> I worked very hard. I would do hours of homework every night, but I am glad I learned how to do homework in high school, and so now I know how to do it here in college. (Peggy)

> I was always. . . .I even consider myself now, and complain sometimes about it, but I was always the worker. I always did the gardening, or the landscaping, or the vacuuming, or the dishes. (Martin)

Parent Categories

The parent interview component of this study offered a unique perspective of these successful high ability students with learning disabilities. The core categories which were evident in data relating to parents were negative school experiences and parental advocacy consistently provided to help their children achieve success in an academic setting.

Negative Experiences in School

The parents in this study described similar negative school experiences to those of their children. In dealing with school personnel, parents found that classroom teachers had faulty perceptions of their children's abilities. To compound the misconceptions, in many cases the teacher or school officials admitted that they simply "did not know what to do" with the student in question.

Negative interactions with individual teachers were numerous and parents could easily recall the names of teachers who proved to be the most negative and ineffective and who created the most stress for their children. In every case, the same teachers had been discussed as negative factors by the participants in the study. Parents remembered teachers on the elementary and, more often, the secondary level who thwarted student progress by refusing to implement instructional modifications. According to the mothers interviewed for this study, negative interactions with teachers were not the only troubling aspects of public school education for these students. The parents also reported that their children had difficulty maintaining relationships with peers. These negative experiences contributed to what parents perceived as an ineffective and troubling school experience for the participants in this study.

Advocacy by the Parent in the School Setting

All of the parents involved in this study described repeated efforts to communicate their children's special needs to school personnel. They described their requests for meetings, additional assessment, and modifications in their youngsters' school environment, class, or teacher. These efforts sometimes resulted in positive actions for their children and in other situations parents perceive that they were considered 'pushy' by school personnel.

The majority of parents sought various types of help for their child outside of the school system and continuously stressed the importance of education for these students. These parents believed in their children and in the value of education and viewed their children's unique personal strengths as the following: determination, stubbornness in the face of adversity, willingness to work hard, and unique social skills.

Discussion

It is clear from the data collected in this study that some high ability students with learning disabilities have negative experiences in school. It is also apparent that some students in this population succeed in an academic setting despite these negative experiences. The major findings in this study incorporate the results derived from the core categories and the responses to the research questions. The negative experiences the participants had in school, as well as the ways they incorporated these experiences into a successful academic college or university program, led to the discussion of the findings which follows.

The Combination of the Learning Disability and the Students' Giftedness

Many of the negative experiences experienced in school by the subjects of this study were related in some way to the combination of their giftedness and their learning disability. It was the *combination* of their abilities and disabilities that caused the participants in this study either to be identified as having a learning disability later in their academic careers, or hampered their identification as having a learning disability in the years that services might have been provided to them during elementary and secondary school. It was also the combination of their abilities and their disabilities that caused them to be negatively perceived by their teachers and in some cases, their parents. Unfortunately, the abilities of these students were clearly reflected in areas other than those which are reinforced and valued in school. Hence, their talents in spatial areas and in the creative tasks at which many of these students excelled caused their teachers and parents to believe that their relatively poor school performance was due to laziness or inattention. In the schools that these students attended, literacy skills seemed to be emphasized often to the exclusion of most of the other talent areas at which these subjects excelled. This attention to reading, writing, and verbal skills caused many of these students to have doubts and confusion about their own abilities and to question why they could not do the things that many of their peers could accomplish with seemingly little effort. Accordingly, it was not just the presence of a learning disability that affected school academic success. Rather, it was the combination of giftedness and the learning disability that created many negative school experiences for this population.

The Relationship Between the Particular Type of Learning Disability and the Student's Gifts and Talents

The participants in this study were able to resolve the conflict between their abilities and their disabilities in one of three ways. First, some participants struggled to gain the compensation strategies needed to directly address their learning disability and become successful in an area that may have initially appeared difficult if not impossible. This was, in large part, due to the participation of certain subjects in the University Program for Learning Disabilities. This enabled their talents to emerge as they used strategies to overcome or at least compensate for their learning disability. Evan, for example, became a political science major despite a learning disability which hindered his skills in writing and reading. Second, a smaller number of participants selected an academic direction in which they had strengths *and* which was not dependent upon the acquisition of compensation strategies or the mastery of an academic discipline that was affected by their specific learning disability. It is clear that this was only possible because these students were in college and could select a major area in which their specific talent could emerge. For example, Peggy's musical talents caused her to pursue a major in voice, thus enabling her to avoid the continued struggle to compensate for her numerous learning difficulties in academic areas. These options are not available to an elementary or secondary student who has either no choices or extremely limited academic choices in school. Third, the majority of participants in this study combined the two options mentioned above as they attempted to both compensate for their learning disability and also select a major area of concentration in which their specific learning disability did not affect academic performance. Colin pursued a major in electrical/systems engineering thereby enabling him to focus on his strengths. He had to learn compensation strategies in order to be successful but he did not have to use them to the extent he would have had he majored in an area that required him to primarily use reading and writing skills.

The Negative Climate That Existed in Elementary and Secondary Schools for Most Participants

Unfortunately, most participants in this study encountered an atmosphere in school in which they did not have positive experiences. Rather, the data collected from participants, parents, and numerous school records indicate that the schools that these students attended and the teachers with whom they interacted were not often helpful in the development of their academic success. The negative experiences of these participants often caused problems that had to be addressed through counseling at a later time. One might hypothesize that some of these students achieved in spite of their elementary and secondary school experiences. There were, however, educators who had a positive impact for most of the subjects in this study and some of these persons (counselors, specialists of learning disabled students, or teachers) had a positive and lasting impact. It must be noted, however, that these educators were the exception rather than the norm.

The Acquisition of Compensation Strategies and Study Skills in College Through a Program for Students With Learning Disabilities

The majority of the participants in this study believe that they learned most of their compensation and learning strategies in college despite their participation in a program for students with learning disabilities at some point during elementary or secondary school. Unfortunately, these programs, according to the perceptions of the students in this study, often focused on remediation of content or the opportunity to do homework or catch up on work missed in class instead of teaching the compensation strategies necessary for independent learning and self-reliance. Their participation in a university program for students with learning disabilities provided their first opportunity that participants had for training in compensation and learning strategies. This program was essential for the participants in this study.

Special Talents Such as Spatial Skills or Intense Interests

All of the participants in this study had special talents or interests which were usually manifested in out-of-school or within-school extracurricular activities and which enabled them to ameliorate their negative school experiences. These talents and interests were recognized and often nurtured by parents and seemed to contribute to the positive sense of self eventually developed by some of the participants in this study despite their negative experiences in school. Many of these students excelled in athletics or sports; others had hobbies or intense interests outside of school. Most excelled in spatial areas that were not rewarded or paid particular attention by schools. The possession of these spatial skills, talents, and interests often allowed the participants of this study to put their negative school experiences in a more appropriate perspective. Some reasoned that if they were so good at something, they did have talent and perhaps they just had to work harder to be better at their academic work. It must be acknowledged that without parental support, the ability to be able to pursue the sports, hobbies, or extracurricular activities would have been lessened. Many of the parents of participants in this study actively sought out opportunities for their children to excel in order to compensate for their poor performance in school. This appears to be a reciprocal relationship in some ways. A child does poorly in school and his or her parents, sensing that their child is bright and talented, look for alternative ways in which the talent can be manifested. This, in turn, causes the parent to invest time and capital into looking for ways to nurture talents. Once this occurs, the child begins to feel better about his/her talents and begins to think that achievement might be possible in other areas, such as school performance. It was the development of these talents which often provided these students with the belief that they could excel in something if they worked hard at it, and if they could do something well, perhaps they could do better in school if they applied themselves and worked harder at it. This belief in themselves often caused them to work much harder at their academic work. Ironically, the hard work was necessary because of their learning disabilities, but it was the acquisition of this work ethic that caused many of these students to work harder and become extremely successful in college. This "cycle of reciprocal talents" existed for participants in this study. Once they learned that they could excel in another area such as athletics in school, or mountain biking or creating miniatures or vocal talents out of school, they often began to believe they could achieve in school; and, eventually, most did.

Conclusion

A somewhat similar journey existed in the process of creating academic success for the participants of this study. Most of the participants in this study had difficulty reconciling their high ability with their learning disability. Many were perplexed about the ways in which their advanced abilities and their learning disability interacted. This process is depicted in Figure 1. It is clear that the process of creating academic success depends upon the degree to which certain intervening experiences exist. At the beginning of the process, the nature and severity of the learning disability interact with the talents and abilities of the participant, and to some extent, create the negative school experiences that each of these students encountered. Those who had severe learning difficulties or learning problems which interfered with the development of their talents and halted their educational progress (i.e., they did not learn to read) usually had the most negative school experiences. Those whose learning problems were less noticeable usually suffered less, but, again, all of these students encountered school experiences ranging from somewhat negative to severely negative.

The intervening positive factors presented in Figure 1 each played an integral role in the process of creating academic success. This process may never be complete for these students because of future challenges that will be encountered. The intervening experiences include:

1. Talents exhibited in another place often provided these students with the belief in their ability to succeed in something that later resulted in achieving some degree of academic success.
2. The continued presence of maternal support—as one participant eloquently summarized: "My mother was always right beside me."
3. The personal qualities that participants exhibited and parents indicated were often created from adversity including: determination, perseverance, ethics of hard work, and sheer stubbornness. Occasionally, these strengths included those directly caused by painful experiences; a desire to succeed may have resulted from the need to show those who erected roadblocks that *one could succeed.* In other words, these students may have attempted to conquer the system that had created obstacles for them.

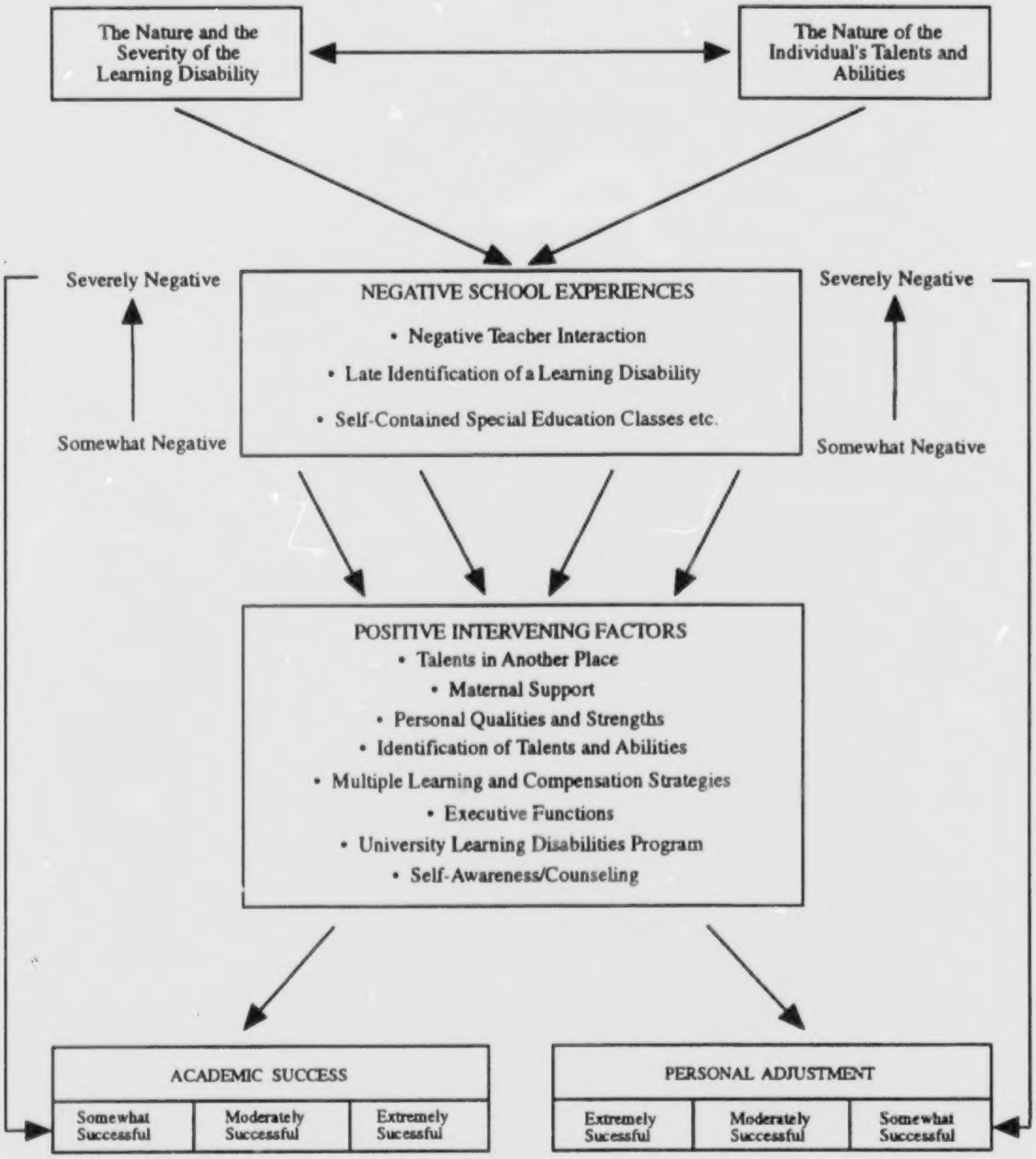
The Nature and the Severity of the Learning Disability
The Nature of the Individual's Talents and Abilities
Severely Negative
Somewhat Negative
NEGATIVE SCHOOL EXPERIENCES
• Negative Teacher Interaction
• Late Identification of a Learning Disability
• Self-Contained Special Education Classes etc.
Severely Negative
Somewhat Negative
POSITIVE INTERVENING FACTORS
• Talents in Another Place
• Maternal Support
• Personal Qualities and Strengths
• Identification of Talents and Abilities
• Multiple Learning and Compensation Strategies
• Executive Functions
• University Learning Disabilities Program
• Self-Awareness/Counseling
ACADEMIC SUCCESS
Somewhat Successful
Moderately Successful
Extremely Sucessful
PERSONAL ADJUSTMENT
Extremely Sucessful
Moderately Successful
Somewhat Successful

Figure 1. Pathways to Academic Success

4. The creation of a personal plan for academic success that was slightly different for each participant, but always included common elements including: multiple learning strategies, the use of carefully selected and individually appropriate compensation strategies, and the integration of certain executive functions that guided decisions made and directions both taken and not taken.
5. The presence of a university or college program for students with learning disabilities was an integral part of the academic success experienced by the persons in this study. All who participated were extremely favorable about the presence of this program.
6. The self-awareness and knowledge that some participants gained about how to create the process of academic success was achieved through their individual experiences and with the help of others, including parents, some educators, and some peers. However, for some of these students, other help was essential in the form of counselors, psychologists, and psychiatrists who were necessary to address negative memories, the fears, and insecurities experienced in their school experiences and early lives. The need for this professional help was usually most clearly felt by those who had experienced the most negative school experiences.

The process of molding these diverse experiences into the creation of academic success was slightly different for each person in the study. All twelve came from different types of families, although similarities existed. All were white, many came from above average socioeconomic backgrounds. One wonders what may happen to very bright students with learning disabilities who come from culturally different backgrounds or economically disadvantaged environments. Each person in this study had a mother who devoted herself to helping her child succeed. The strategies used by each mother varied, but the image was consistent for each child. Each participant knew that at every turn and struggle, the presence of his/her mother loomed large and comforting, standing behind the child in an omnipresent manner throughout life. This presence emerged regardless of whether the mother worked outside of the home and regardless of how many other children existed in the family. One may ask, therefore, what happens to children who do not have a similar source of support? Most of the participants also found an academic environment in which they could succeed. The majority of participants in this study experienced this success in the supportive environment provided by the University Program for Students With Learning Disabilities. One also wonders, therefore, what happens to students of high potential who do not find an appropriate university or school program?

References

Bandura, A. (1986). *Social foundations of thought and action.* Englewood Cliffs, NJ: Prentice-Hall.

Baum, S., & Owen, S. V. (1988). High ability/learning disabled students: How are they different? *Gifted Child Quarterly, 32,* 321-326.

Davis, G. A., & Rimm, S. B. (1985). *Education of the gifted and talented.* Englewood Cliffs, NJ: Prentice-Hall.

Denckla, M. B. (1989). Executive function, the overlap zone between attention deficit hyperactivity disorder and learning disability. *International Pediatrics, 4*(2), 155-160.

Guba, E. G. (1978). *Toward a methodology of naturalistic inquiry in educational evaluation.* Los Angeles, CA: University of California Press.

Jick, T. D. (1983). Mixing qualitative and quantitative methods: Triangulation in action. In J. Van Maanen, (Ed.), *Qualitative methodology* (pp. 135-148). Beverly Hills, CA: Sage Publications.

Minner, S. (1990). Teacher evaluations of case descriptions of LD gifted children. *Gifted Child Quarterly, 34,* 37-39.

Prater, G., & Minner, S. (1986). *Identification of atypical gifted children* (Technical Report. No. 2). Murray, KY: Murray State University, Department of Special Education.

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press.

Spradley, J. P. (1979). *The ethnographic interview.* New York: Holt, Rinehart, and Winston.

Strauss, A. L. (1987). *Qualitative analysis for social scientists.* New York: Cambridge University Press.

Strauss, A. L., & Corbin, J. (1990). *Basics of qualitative research.* Newbury Park, CA: Sage Publications.

Van Maanen, J. (1983). Reclaiming qualitative research methods for organizational research. In J. Van Maanen (Ed.), *Qualitative methodology* (pp. 9-18). Beverly Hills, CA: Sage Publications.

Whitmore, J. R., & Maker, J. (1985). *Intellectual giftedness in disabled persons.* Rockville, MD: Aspen Publications.

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Talents in Two Places: Case Studies of High Ability Students With Learning Disabilities Who Have Achieved

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CHAPTER 1: Introduction and Overview of the Study

Identifying and serving gifted students with handicapping conditions is a priority in the Javits Gifted and Talented Education Act. Little research has been conducted on this population, although Davis and Rimm (1985) estimated that there are somewhere between 120,000 and 180,000 gifted students with disabilities in American schools. Prater and Minner (1986) suggested that the majority of these students have learning disabilities. Minner (1990) found that classroom teachers, including teachers of gifted students, ". . .may hold some rather stereotypical notions about learning disabled and/or gifted students which, in turn, may cause them not even to consider such children in a program for gifted youngsters" (p. 38). Whitmore and Maker (1985) summarized their analysis of this population in this way:

> Intellectually gifted individuals with specific learning disabilities are the most misjudged, misunderstood, and neglected segment of the student population and the community. Teachers, counselors, and others are inclined to overlook signs of intellectual giftedness and to focus attention on such deficits as poor spelling, reading, and writing. Expectations for academic achievement generally are inaccurate—either too high and unrealistically positive or too low and discouraging of high aspirations. It is not uncommon for gifted students with learning disabilities to be told that college study is inappropriate for them, that professional careers will be unattainable, and that jobs requiring only mechanical or physical abilities are more fitting to their abilities. Without equal opportunity to try, these individuals may be denied access to appropriate educational and professional career opportunities. (p. 204-205)

This study investigated factors that enable some gifted students with learning disabilities to succeed in an academic setting. The study also examined the steps that led to the identification of these students. Little information exists about the academic experiences and compensation strategies used by gifted students with learning disabilities who succeed in college. In this study, gifted students with learning disabilities who have successfully enrolled in or completed college were identified and asked to participate in this research. Qualitative methodology, including case studies, open-ended interviews, and document review, was used.

Researchers report that gifted students with learning disabilities are often productive in nonacademic settings (Baum, 1984; Fox, Brody, & Tobin, 1983; Schiff, Kaufman, & Kaufman, 1981; Whitmore, 1980). Baum's study of an enrichment program for gifted students with learning disabilities led her to suggest four educational implications for special programs for this population. First, these students need and deserve focused attention on a gift or talent in its own right—rather than a total focus on their disabilities.

Second, this population requires a supportive environment which values and appreciates individual abilities. Third, students need strategies to compensate for their learning problems as well as direct instruction in basic skills. Fourth, gifted students with learning disabilities must become aware of their academic and learning strengths and weaknesses and receive help to cope with this discrepancy. Wingenbach (1985) believes that meta-awareness, task analysis ability, and the incorporation of strengths to compensate for weaknesses are necessary for gifted students with learning disabilities to succeed. McGuire (1988) and McGuire and Shaw (1987) have investigated the special needs of college students with learning disabilities. However, no research could be found focusing specifically on gifted college students with learning disabilities.

Little research has been conducted on gifted students with learning disabilities. Much of what has been written about this population is descriptive, consisting mainly of textbook chapters. In one data-based study, Baum and Owen (1988) found that gifted students with learning disabilities had unique characteristics related to persistence and individual interests and possessed lower academic self-efficacy than their learning disabled peers who had not been identified as gifted. Self-efficacy, according to Bandura (1986), is the self-perception that a person can organize and carry out some action. Baum and Owen further found that 36% of the students in their study who had been identified as possessing a learning disability simultaneously demonstrated behaviors associated with giftedness.

Baum (1988) investigated an enrichment program in which gifted students with learning disabilities met for 2 1/2 hours a week during an entire school year. Most students showed gains in self-esteem, learning behavior, and creative productivity. Baum (1985) also studied three groups of students: gifted students, gifted students with learning disabilities, and average students with learning disabilities. The gifted students with learning disabilities were found to be more creative than average students with learning disabilities. However, the gifted students with learning disabilities were also the most disruptive in school. These students perceived themselves as academic failures, demonstrating a poor sense of academic self-efficacy.

The difficulty of identifying gifted students with learning disabilities has been discussed in the literature. Whitmore and Maker (1985) suggested several early and reliable indicators of giftedness in students with learning disabilities. They believe giftedness can be revealed by: oral language, memory, problem solving skills, curiosity and the drive to know, and creativity. Denckla (1990) suggested that the label of learning disability may need to be changed to learning difference. She questions the use of discrepancy information between IQ and achievement tests for identification of gifted students with learning disabilities and refers to newer hypotheses in intelligence measurement in the area of executive function. Denckla offers a fascinating perspective by stating that, in essence, everybody has learning disabilities since people have very diverse landscapes of their ability structure.

Statement of the Problem and Research Questions

As noted above, research on gifted persons with learning disabilities is extremely rare. The perceptions of the persons investigated in this study provided information that will help to identify this population and suggest specific educational interventions that can be designed to meet the unique needs of this group. The following questions guided this study:

1. What are the self-perceived strengths and weaknesses of gifted college students with learning disabilities?
2. What were the specific natures of the learning disabilities of the individuals in this study?
3. When and how were students identified as having a learning disability?
4. Were these students also identified as gifted?
5. What is the collective view of this population regarding their treatment by others and others' perceptions of them (parents, teachers, peers, guidance counselors)?
6. Were modifications made in the instructional practices and educational programs for this population?
7. What were the positive and/or negative effects of labeling (either gifted and/or having a learning disability) on this population?
8. What specific educational intervention, assistance, program, or strategies does this population need in order to realize their potential and to succeed in an academic environment?
9. Were executive functions as described by Denckla (1990), including metacognition, proactive organization, self-regulation, and motor control employed by the gifted students with learning disabilities included in this study?

Research Design and Methodology

Qualitative methodology was used in this study to investigate subjects' perceptions and experiences which are in turn related to the individual's external behavior, in this instance, overcoming the obstacle of the learning disability. Accordingly, the individual's perceptions are of primary importance in a study of this nature. In order to obtain the most accurate image of the subjects' experiences and perceptions, open-ended questionnaires and in-depth interviews were used to explore the subjects' and their parents' experiences.

Sample

Twelve currently enrolled college or university students or recent graduates who were identified as having a learning disability comprised the sample for this research (see Table 1). These individuals either were identified as gifted in elementary or secondary school, clearly would have been eligible to participate in a gifted program if one had been available, or had been considered for participation. Information such as IQ and/or achievement tests, outstanding performance in one or more academic areas, teacher nomination, and product information from an academic portfolio was used to document the label of giftedness.

Data Collection

Multiple viewpoints on a phenomenon, or triangulation, allows greater accuracy of interpretation than any of the viewpoints or data sources considered individually (Guba, 1978; Jick, 1983; Van Maanen, 1983). This cross-validation can be achieved by "between-methods" triangulation in which two or more methods of data collection are used. To ensure the highest degree of accuracy possible, data for this study were collected using three methods: records and testing information, written responses to an open-ended questionnaire, and in-depth interviews with each subject and with one of their parents.

The number of interviews conducted was determined by the need to reach the point of data saturation. Data saturation occurs when the subjects only provide information which has become redundant and does not offer useful reinforcement of information previously collected (Spradley, 1979). The open-ended questionnaire served as a preliminary source of issues to be investigated further during the interviews as well as an additional source of information.

Prior to the initial interview, each subject was provided with a biographical questionnaire, and written information about the study and his or her anticipated role in it. Parents and/or teachers were asked to complete a brief written summary of their perceptions of each subject's academic history and the effects of their learning disability and label of giftedness. Each interview session was used to clarify, verify, and expand upon the subject's responses. All interviews were tape-recorded and transcribed. Field notes and observations made by the researcher at the time of the interviews were added to the transcriptions. Interviews and other data collection procedures followed guidelines suggested by Glaser and Strauss (1967), Spradley (1979), Strauss (1987), and Strauss and Corbin (1990).

Data Analysis

Data analysis was conducted using techniques designed by Strauss (1987) and Strauss and Corbin (1990). As suggested by these researchers, data analysis coincided with data collection and affected the collection of additional data. Initially, the researchers planned to suspend judgment of perception or categories according to procedures discussed by other methodologists (Barritt, Bleeker, Beekman, & Mulderij, 1985; Miles & Huberman, 1984). However, it became clear from the earliest interviews that certain data were emerging that should influence the interview protocol and lead to the addition of certain questions that had not been originally planned (e.g., Were you ever retained a grade in school? Tell us about your experiences in the learning disability program.). The category of negative experiences in school was so pervasive from the earliest interviews that it became apparent that theory grounded in data collection was beginning to formulate. Accordingly, the techniques advocated by Strauss and Strauss and Corbin were used for data analysis. Coding techniques are described in detail in Chapter 3. They included the use of a coding paradigm described by Strauss and Strauss and Corbin as well as coding techniques advocated by the same researchers including three levels: open coding, axial coding, and selective coding. Open coding is the earliest stage in the coding in which the researcher minutely examines the data and attempts to identify concepts which have similarities, events, and categories that can be grouped together and labeled according to events or phenomenon. Then, concepts begin to be classified together and compared for similarities resulting in a group being combined to form a category. The next stage in coding is axial coding in which each category is examined according to the coding paradigm and knowledge emerges about the relationships between categories. In the last stage of coding, selective coding, core categories are selected from those categories which have emerged in data collection and analysis.

Validity

The validity of this research study is dependent upon the description of the experiences of these high ability students with learning disabilities. The use of in-depth interviews with subjects and parents, questionnaires, and document review assisted in developing grounded theory about how high ability students with learning disabilities succeed in postsecondary experiences.

The use of two researchers each coding the data and a group of novices challenging the codes was also used to decrease bias and increase validity. Additionally, the major criteria listed below, which are cited by Strauss and Corbin (1990) for judging the validity of the research process and the empirical grounding of a study, were used:

- indicators pointing to the major categories emerging in the study
- reasons for the selection of the core category
- the way in which major categories guide the formulation of theory and the interaction of additional data gathering and theoretical formulation
- the hypotheses of conceptual relationships between categories and how they are formulated, tested, and related
- the conceptual linkages in relation to and grounding in the data
- the conceptual density of the categories and the properties that explain the theory
- an examination of hypotheses not proven by data and an explanation of discrepancies
- conditions affecting the phenomenon

Limitations

The reliability and validity of this qualitative investigation relies upon the accuracy and thoroughness of the data to conceptualize, categorize, and arrive at the core categories and findings of the study. There are four constructs proposed by Lincoln and Guba (1985) that uphold the guiding principles of qualitative research. *Credibility,* the first construct, addressed the concern that the study was conducted in a manner which ensures that the subject was accurately defined and described (p. 296). Internal validity is established by following systematic procedures to develop a rich description showing the integration of a core category with all major categories that have been substantiated in the data (Strauss & Corbin, 1990).

Lincoln and Guba's second construct is *transferability,* which is the concern of this study's external validity. By stating the theoretical parameters which guided the data collection and analysis of this study, issues relating to the generalizability of the findings of this study to other settings were addressed (Marshall & Rossman, 1989, pp. 145-146). To further the generalizability of the study, data from different sources were gathered, multiple cases explored, and multiple data gathering techniques used to enhance the study's usefulness for other settings (p. 146).

Dependability, the third construct, was accounted for through the documentation of data collection and analysis. Replicability will be problematic in that the social world is always changing. Procedures to ensure the reliability of data collection, analyses, and an in-depth description were followed (Marshall & Rossman, 1989) to establish the trustworthiness of this study: value-free note taking; asking questions of the data; checking and rechecking data; testing competing hypotheses; using different researchers to code the same data and comparing coding; searching for and documenting negative instances of the findings.

The final construct proposed by Lincoln and Guba, *confirmability,* relates to the concept of objectivity, and provides the foundation which supports grounded theory (Strauss & Corbin, 1990, p. 254). In building grounded theory, conceptual linkages were formed which were dependent on themes which emerged from data to create major categories; conceptual relationships between categories; conceptual density of the categories and properties that explained the theory; and the conditions which affected the phenomenon. Objectivity used during data analyses affected two issues: 1) how the findings were verified, and 2) the ability to produce significant findings.

This research monograph is organized in five chapters. This chapter provided an introduction to the research study. In Chapter 2, existing research and literature on the subject of high ability students with learning disabilities are summarized. The methodology used in this study is discussed in Chapter 3, and the results are summarized in Chapter 4. A discussion of the results is presented in Chapter 5, as are implications for educators, parents, and students.

CHAPTER 2: Review of Related Research

There are few problems in the education of highly able students as perplexing as the dilemma of ability masked by disability. The frustrations of high ability students who *can* but *do* not achieve because they have not learned how to compensate for their learning disabilities have been previously discussed in the literature and emerge poignantly in this study. In this review of research, a background for several areas of this study is provided including: defining and identifying giftedness, defining and identifying learning disabilities, and research on the interaction of giftedness and learning disabilities.

Defining and Identifying Giftedness

Gifted students were traditionally identified by the use of IQ measures (Hollingworth, 1942; Witty, 1951). Terman's comprehensive longitudinal study of over 1500 students with IQ scores of at least 140 on the Stanford-Binet Intelligence Test set a precedent for much of the subsequent research on gifted students. Terman and his associates examined personal and lifelong accomplishments of the participants in this study. These early findings promoted what has been labeled the "Terman Myth" (Webb, Meckenstroth, & Tolan, 1982): that gifted students consistently score high on achievement and aptitude tests and do well in academic environments. While Hollingworth (1942) supported the position of high ability among the high IQ gifted, she noted that chinks can often be found in the armor of some gifted students which can include underachievement or other social and emotional problems.

Terman's (1959) later analysis in his longitudinal study concluded that IQ measures may not predict a student's achievement or take into account other factors which may contribute to high levels of potential. During this same time period, other researchers began to examine students whose IQ scores indicated giftedness but whose performance was not commensurate with the measured IQ score. Gowan (1957) studied underachieving gifted students and found an interesting anomaly. Gifted students with high IQ scores often performed lower in academic settings than what educators would expect, given their high scores on measures of intelligence. These results differed from the high achievement students described in Terman's earlier research.

During the 1950s, research in gifted education began to shift from the previous total reliance on IQ tests to identify giftedness. Witty (1958) emphasized assessment of intellectual potential through the examination of actual performance in various fields of endeavor, resulting in a later definition of gifted children as ". . .any child whose performance in a potentially valuable line of human activity is constantly remarkable" (p. 67). To further investigate giftedness as more than performance on an IQ instrument, Hildreth (1966) examined the multisided intellectual abilities that exist in gifted and talented students. Guilford (1967) proposed a multidimensional model of abilities that indicated that IQ scores measured only a fraction of human intellectual abilities. The change in emphasis from the use of a singular criterion (IQ score) is perhaps best evidenced in the United States Office of Education federal definition of giftedness that included multiple fields of potential giftedness. That definition, included in a federal report entitled *The Marland Report* (1972) which described the status of programs for the gifted at that time, was as follows:

> Gifted and talented children are those identified by professionally qualified persons and who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and to society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas:
>
> (a) general intellectual ability
> (b) specific academic aptitude
> (c) creative or productive thinking
> (d) leadership ability
> (e) visual or performing arts
> (f) psychomotor ability (p. 2)

This federal definition was slightly altered in PL 95-561 in 1978 by the deletion of psychomotor ability.

The use of IQ test scores as the sole indicators of giftedness was further questioned by Wallach's (1976) findings that test scores "do not necessarily reflect the potential for creative productive accomplishments" (p. 60). A more expansive definition of giftedness was offered by Renzulli in 1978:

> Giftedness consists of an interaction among three basic clusters of human traits–these clusters being above average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs. (p. 73)

Specialists in gifted education have urged the use of multiple criteria identification systems since the mid-1970s. Multiple criteria identification systems vary by state and even by local school systems. Placement procedures for gifted students are dependent upon definition, targeted population, and the selected model for programming. The actual screening procedure may involve a variety of identification instruments, such as tests for creativity, behavior rating scales, and product assessment. It is not uncommon for school systems to require a cut-off score on a specific instrument (such as the WISC-R or Stanford-Binet) for entrance to gifted programs.

Some school personnel have used a matrix system to assemble a record of student data for identification purposes. The Baldwin matrix system has been used with some degree of effectiveness with special populations of gifted students (Baldwin & Wooster, 1977) as has the Frasier Talent Assessment Profile (Frasier, 1990).

Two identification models also have been widely used nationally. The Revolving Door Identification Model (Renzulli, Reis, & Smith, 1981) creates a larger talent pool of students than is normally identified in special programs. This pool allows for the initial identification of approximately 15% of the student population to be targeted for enrichment level services. "Action information" or the pursuit of an interest or topic, area of study, issue, or idea is then utilized as a second form of identification to further move the student into appropriate services. The second identification model commonly used was developed at Johns Hopkins University by Julian Stanley and his colleagues. The Talent Search

Identification Model relies on the scores of grade level standardized achievement tests at the 95th percentile or higher. Students are then tested with the Scholastic Aptitude Test (SAT) as a secondary identification measure. VanTassel-Baska (1984) reported that Talent Search tests over 80,000 students a year throughout the country.

Defining and Identifying Learning Disabilities

Students who learn at a rate that differs from the norm for reasons other than lack of opportunity, social-emotional disturbance, sensory defect, or a general mental impairment are referred to as "learning disabled" (Hallahan & Bryan, 1981). Students with learning disabilities often do not exhibit the academic gains demonstrated by their peers who do not have learning disabilities. Since conventional classroom instruction often fails to meet the needs of these students, they are regarded as having special educational needs (Taylor, 1989).

Although interest in this population of students began after World War II, educational programming did not begin until the mid 1960s. Strauss and Lehtinen (1947) described children with learning deficits, perception problems, difficulty with perseveration, and/or behavior problems as "brain injured." Educators and psychologists as a whole found this term objectionable and it was replaced by the "Strauss Syndrome" in 1957 (Baum, Owen, & Dixon, 1991). Subsequently, research continued on this group of students focusing on the neurological aspects of their disabilities and resulting behaviors. General support for these students as a distinct group solidified with the establishment of the Association for Children with Learning Disabilities in 1963 (Kirk, 1963). This organization spearheaded a national legislative campaign which resulted in the passing of legislation (PL 94-142, 1975) mandating special educational opportunities for students with learning disabilities (Taylor, 1989). Public Law 94-142 states:

> “Specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or in using languages spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of retardation, of emotional disturbance, or of environmental, culture, or economic disadvantage.

A student has a specific learning disability if:

(a) The child does not achieve commensurate with his or her age levels in one or more of the areas listed [below]. . .when provided with learning experiences appropriate to the child's age and ability levels, and
(b) The [multidisciplinary] team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:
    (i) oral expression
    (ii) listening comprehension
    (iii) written expression
    (iv) basic reading skill
    (v) reading comprehension
    (vi) mathematics reasoning (PL 94-142)

The impact of PL 94-142 on the delivery of services to this population has been profound, and it has served to bolster the support of educators for students with learning disabilities. Yet, its definitional guidelines can be questioned due to the wide range of variability among this population (Taylor, 1989). Ysseldyke and Algozzine (1983) indicate that this operational definition is dependent upon educators' expectations of variations in abilities among all children.

A more recent definition enhances the description of learning disabilities found in PL 94-142. This definition was originally proposed in 1981 as an alternative to the USOE definition by the National Joint Committee for Learning Disabilities (NJCLD). This definition was modified in 1988 and states:

> Learning disability is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing and reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunctions, and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interactions may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of these conditions or influences. (NJCLD, 1988, p. 1)

Hammill (1990), in an extensive review of definitions, has suggested that consensus is near in recognizing the NJCLD definition as that of professional choice.

The identification of high ability students with learning disabilities traditionally begins with referral information, usually from school personnel and occasionally from parents. Since the enactment of PL 94-142, school systems have been increasingly informed of the characteristics of students with learning disabilities. This awareness has enhanced identification of school age students, but similar identification procedures have not been as well implemented in the nation's colleges and universities (Johnson, 1987). Referral is usually followed by a three-staged identification process which includes a referral meeting, comprehensive diagnostic testing, and the interpretation of results to determine eligibility. A multidisciplinary team usually consists of an administrator, a resource teacher, and a counselor who is engaged in the screening process to determine eligibility. It is common to involve the classroom teacher and other relevant school personnel, such as the school psychologist, in this procedure. Parents are usually included in the next stage of the special education process, which includes the development of an individual education plan (IEP).

Pivotal to the identification of learning disabilities is a diagnosis based on exclusion and discrepancy (Johnson, 1987; Taylor, 1989). For example, IQ scores are typically used to predict expected achievement. When IQ scores are compared to the achievement scores, significant discrepancies that appear indicate areas of disability (Cohen, 1983). Taylor (1989) pointed out that no two learning disabilities are alike and these discrepancies from the norm take on a variety of patterns. Generally, discrepancies provide little insight into the nature of the learning disability. Various subtest scores may demonstrate discrepancies from the norm (Cohen, 1983; Johnson, 1987; Kass, 1977; Taylor, 1989). The exclusionary aspect of students with learning disabilities is reflected in the federal definition provided earlier. In order for a cognitive deficit to be called a learning disability, other factors which may interfere with intellectual functioning must be excluded. These factors include serious emotional problems, mental retardation, inadequate educational opportunities, environmental disadvantage, or physiological impairment.

Extending the discussion of definition and identification of learning disabilities to an adult population reveals complexities which differ somewhat from challenges at the elementary and secondary levels and have yet to be resolved by the field. Anderson (1993) noted that the definitional controversy mentioned by Hammill (1990) and others (Johnson, 1987; Mercer, 1987) also pertains to postsecondary settings which are under the jurisdiction of Section 504. This statute does not stipulate any operational criteria for identifying the disability, leaving college service providers in need of establishing a mechanism to determine eligibility for services. Further problems include the inappropriateness of using an aptitude-achievement discrepancy as an indicator of learning disability among adults who often have developed successful compensatory strategies, yet can experience subtle difficulties in higher order functioning (Brinckerhoff, Shaw, & McGuire, 1993). Instrumentation is seldom normed on an adult population, thus raising questions about reliability and validity of testing used for assessment (Carlton & Walkenshaw, 1991; Gregg & Hoy, 1990; Norlander, Shaw, & McGuire, 1990). Finally, the responsibility of providing documentation at the postsecondary level rests solely on the student (Heyward, Lawton, & Associates, 1991). Colleges and universities are not required to identify students or provide assessment. As a result, there is wide variability in criteria for what constitutes acceptable documentation of a learning disability to determine who is eligible for services at the postsecondary level.

The use of diagnostic batteries to identify students with learning disabilities has been the focus of a vast quantity of learning disabilities research. Various problems exist with the diagnosis of learning disabilities in an adult population such as: the acquisition of compensatory strategies, basic skills not attained resulting in skill deficits and motivation problems, and the absence of knowledge of content that may be required for future higher education.

The Interaction of Giftedness and Learning Disabilities

Educational research has expanded in recent years with the study of various special populations, and new theories of intelligence (Gardner, 1983; Sternberg, 1981) have revealed that the potentiality of some students may not be measured accurately by current measurement instruments. High ability students with learning difficulties have been studied for many years. In 1937, Samuel Orton found wide ranges of intelligence among non-readers. His extensive work with a specific reading and writing disability known as dyslexia indicated many high ability students had learning problems. Some of the nonachieving high IQ students in Terman and Oden's (1947) study exhibited feelings of inferiority, an inability to persevere in the accomplishment of goals, and a general lack of self-confidence. According to current theorists and researchers, these characteristics are common among high ability students with learning disabilities (Baum, Owen, & Dixon, 1991; Daniels, 1983; Whitmore & Maker, 1985).

As early as 1957, Gowan noted discrepancies between ability and/or potential as measured on IQ instruments and academic performance. His findings may have influenced discrepancy formulas currently used frequently to diagnose learning disabilities. For example, high scores in a performance area might be coupled with low scores in a verbal area. The examination of the lives of highly accomplished individuals who lived in the past is often used as a rationale for various educational interventions or practices. Eminent individuals, in particular, often experienced difficulty with the educational system.

Goertzel and Goertzel (1962), in studying the lives of prominent individuals, found that many avoided school, had different learning styles from those used for instruction, and utilized unique compensation styles to overcome learning problems. More recently, West (1991, 1992) discussed the phenomenon of individuals such as Albert Einstein, Michael Faraday, and James Maxwell who exhibited superior talents in visualization, yet who were, by recent standards, also dyslexic.

Almost one third of the eminent individuals studied by Goertzel and Goertzel (1962) overcame some form of disability. The posthumous diagnosis of eminent historical figures as having learning disabilities is quite controversial among researchers of learning disabilities. Yet, Thompson (1971) suggested that an examination of the school behaviors and written documents of Auguste Rodin, George S. Patton, Thomas Edison, Woodrow Wilson, and Albert Einstein provides evidence that each had some type of learning disability. Other world figures exhibiting characteristics that resemble learning disabilities include Carl Jung, Alfred Adler, Gregor Mendel, Charles Darwin, James Watt, Paul Gaugin, Hans Christian Anderson, Leo Tolstoy, and Winston Churchill (Thompson, 1971). Both concerns about the use of historical research and the lack of documentation of diagnostic procedures to identify historical figures as having learning disabilities bother some theorists and researchers in the field of learning disabilities (Adelman & Adelman, 1987). However, the biographical records and the documentation of cognitive, neuropsychological, and biological characteristics of these eminent individuals do correspond with current indicators of learning disabilities (Aaron, Phillips, & Larsen, 1988).

The specific research concerning high ability students with learning disabilities begins with the search for gifted students with disabilities. Following the passage of PL 94-142, the expanded emphasis on the education of students with handicapping conditions created an interest in students who were gifted and demonstrated learning disabilities. Hokanson and Jospe (1976) found that, among all handicapping conditions, the largest population of high ability students were identified as having learning disabilities. Project SEARCH (Hokanson & Jospe, 1976) focused on the identification of high cognitive ability in students with handicapping conditions. In this study, Hokanson and Jospe learned that creative ability was demonstrated by high ability students with learning disabilities. These students were identified as having specific learning disabilities and only considered for educational services to remediate their disabilities.

Sporadic case studies also have indicated the presence of artistic talent among students with learning disabilities. Vantour (1976) described gifted students with learning disabilities in the classroom and placed the instructional emphasis on students' artistic abilities rather than their scholastic disabilities. A similar case study was reported by Mindell (1982) about a talented dyslexic student. Two years after the passage of PL 94-142, Maker (1977) examined the strengths and weaknesses of gifted students with handicapping conditions, and provided initial suggestions for programs and services for gifted students with handicapping conditions. A major concern expressed by Maker (1977) was the difficulty of identifying this population, specifically the inflexibility of reliance on IQ score cut offs. The existence of this population was further supported when Educational Resources Information Center (ERIC) listed the heading "gifted handicapped" in their national retrieval system and when The Council for Exceptional Children (CEC) held two major conferences on this special population.

Case studies which continued to appear in the literature questioned the possibilities of the coexistence of giftedness and learning disabilities (Meisgier, Meisgier, & Werblo, 1978). Mauser (1981) found 2.3% of 5000 identified students with LD had an IQ of over 120. Even though the areas of learning disabilities and giftedness were both well established, the combination of these traits continued to meet with resistance from educators (Wolf & Gygi, 1981).

Subsequent case studies completed by Whitmore (1980) and French (1982) contrasted the inherent abilities and inabilities of gifted students with learning disabilities. Large discrepancies have been found between verbal and performance scores, creating puzzling concerns for psychological examiners.

A comparison of the scores of three groups of students (gifted students, students with learning disabilities, and gifted students with learning disabilities) on the WISC-R was made (Schiff, Kaufman, & Kaufman, 1981) which revealed the discrepancies between verbal and performance scores of gifted LD students. This study is consistently referenced in all later work on this topic. However, the conclusions drawn from the discrepancies on WISC-R subtests fueled the debate (Brown & Yakimowski, 1987; Silverman, 1989). The current consensus maintains that the discrepancies are evident, but the isolation of certain subtests as a sole means to identify gifted students with learning disabilities is inappropriate (Baum et al., 1991; Hansford, Whitmore, Kraynak, & Wingenbach, 1987; Silverman, 1989).

In 1983, three texts were published on gifted students with learning disabilities. *Learning-disabled/gifted Children: Identification and Programming* (Fox, Brody, & Tobin, 1983) featured sections from various authors on identification issues, clinical evidence, and programming issues. *Teaching the Learning-disabled/gifted Child* (Daniels, 1983) suggested various forms of remedial programming and emphasized the social and emotional aspects that both contributed to and were exacerbated by gifted students learning to deal with learning disabilities. The third text entitled *The Spatial Child* by John Dixon (1983) focused on the unique spatial abilities of students with learning disabilities. Specifically, the relations between these spatial abilities and the arts were described. Recently, a fourth book, *To be Gifted and Learning Disabled* (Baum et al., 1991), has been published on gifted students with learning disabilities. It provides numerous examples of the possibilities that exist when attention is paid to student's strengths instead of their disabilities.

Research on high ability students with learning disabilities has been difficult because of problems in defining each population. The fields of gifted education and education of students with learning disabilities have long been separated by their own definitions for the population to be served, as well as by their separate professional organizations, journals, and recommended educational practices. Practitioners in both fields have indicated that their respective federal definitions are inadequate (Boodoo, Bradley, Frontera, Pitts, & Wright, 1989; Renzulli, 1978; Taylor, 1989; Vaughn, 1989; Ysseldyke & Algozzine, 1983).

Students who exhibit characteristics of both the gifted and learning disabled populations pose quandaries for educators. The misconceptions, definitions, and expected outcomes for these types of students further complicate the issues facing appropriate programming for this population (Baum et al., 1991; Whitmore, 1986). Awareness of these students' needs is becoming more common with both the teachers of the gifted and the teachers of students with learning disabilities, yet most school districts have no provision for intervention programs for these students (Boodoo et al., 1989). And, according to statistics gathered in 1991, only 2.2% of all college students entering institutions across the country had learning disabilities (Henderson, 1992).

Problems Associated With Identification of High Ability Students With Learning Disabilities

Problems are inherent in the identification of both gifted students and students with learning disabilities. In order to examine the problem of identification of these students, Whitmore and Maker (1985) suggested that four major categories of obstacles be considered. First, stereotypical expectations are often held about gifted children. Terman and Oden's (1947) work was instrumental in reversing the stereotypical image of the gifted child as a weakling wearing thick glasses. However, stereotypes remain, such as, the gifted are always mature, self-directed, and well behaved in the regular classroom (Whitmore & Maker, 1985).

The second category of obstacles to identification includes developmental delays which may occur in this population (Baum et al., 1991; Silverman, 1989; Whitmore & Maker, 1985). The occurrence of handicapping conditions may produce delays in specific developmental abilities that are often used as indicators of above average intellectual giftedness (Maker, 1977). Most researchers agree that while developmental delays may hinder intellectual aptitude, they should not be considered indicators of cognitive inability.

The third obstacle includes incomplete information about the child which tends to limit many professionals' view of the child's potential. Educators seldom are provided with detailed information about the characteristics of high ability students with learning disabilities (Boodoo et al., 1989). This may contribute to the under-identification of this population, as the classroom teacher may concentrate on the various forms of demonstrated disruptive behaviors and learning deficits instead of the talents the youngster may possess. In most cases, classroom teachers do not have access to information from other relevant sources. The input of medical and psychological professionals, as well as parents and individuals from the students' community, may provide insight into potential giftedness.

The last obstacle to identification relates to existing programming for students who have learning disabilities. In programs they seldom have opportunities to display superior mental abilities. Baum (1988), Daniels (1983), and Whitmore (1980) have called attention to the lack of appropriate curriculum modifications for high ability children with learning disabilities. While specialized curricula have existed for students with specific learning disabilities for some time, a lack of information exists about enrichment programming for the high ability student with learning disabilities. It is possible that the regular curriculum contributes to the under-identification of these students by failing to provide opportunities for strengths and abilities to be demonstrated (Baum, Emerick, Herman, & Dixon, 1989).

Considering these obstacles, the identification of high ability students with learning disabilities (GT/LD) has typically been an afterthought to the identification of the student as underachieving or in need of special education services. The problem of identifying GT/LD students is magnified by the absence of procedures to locate this population within most public schools (Boodoo et al., 1989). Public school systems today often find difficulties in providing educational opportunities for exceptionally able students. As PL 94-142 guarantees the delivery of special education services to the student with learning disabilities, students who meet both criteria may be easily overlooked or funneled toward remediation services (Boodoo et al., 1989; Cremins, 1988; Daniels, 1986).

Dependence upon the classroom teacher for initial identification of students for exceptionality continues. Since 1976, classroom teachers have been provided with inservice training, undergraduate coursework, and awareness sessions for the identification of learning disabilities in students. These same procedures may exist for identification of giftedness, but this is often dependent upon state mandates. The identification of high ability students with learning disabilities is a rarity in school inservice programs and is more often found in presentations at professional association conferences. A general lack of awareness exists regarding the phenomenon of gifted students with learning disabilities (Boodoo et al., 1989; Daniels, 1986; Yewchuk, 1986). In fact, Minner (1990) found classroom teachers who have been provided with sample case studies are less likely to identify a student as either gifted or gifted with learning disability. Classroom teachers often find it difficult to recognize giftedness in one area when the same student is failing in other areas (Baum et al., 1991; Yewchuk, 1986).

A substantial amount has been published about various student traits or characteristics which impede or hamper the identification of high ability students with learning disabilities. Some students become frustrated with their inability to master certain academic skills, others develop a low self-esteem and a lack of organization skills. The most common characteristics of high ability students with learning disabilities identified by researchers and educators are included in Table 1.

Researchers and practitioners who have become interested in this population of students have also identified positive characteristics or traits which may help to bring this population to the attention of educators or parents. Table 2 provides a listing of these strength areas which include: creativity, advanced use of vocabulary, analytical and spatial abilities, problem solving skills, and a wide variety of interests.

Specific instructional strategies that will benefit this population have also been recommended by those with expertise in this area. For instance, involving high ability students with learning disabilities in an enrichment or gifted program can produce positive results (Baum, 1984). A summary of these suggested instructional strategies is included in Table 3.

Forms of Interventions for Students With Learning Disabilities

Models of special education programs for students with learning disabilities are as numerous as models of gifted education. The delivery of services generally falls into the following categories: itinerant teacher, learning assistance center, resource room, self-contained classroom, and the regular classroom (Masters & Mori, 1986). The itinerant teacher model utilizes educators with a knowledge of a variety of instructional practices to bring services to the child with a learning disability (Schultz, Carpenter, & Turnbull, 1991). This consulting teacher makes daily visits to provide services in the way of remedial strategies in the regular classroom setting. Originally conceptualized as a consulting teacher who is able to locate and use resources effectively, states with budget concerns have assigned this role to a teacher's aid in a learning assistance center (Hardman, Drew, Egan, & Wolf, 1993).

Table 1

Characteristics of GT/LD Which Hamper Identification as Gifted

Characteristic	Reference
Frustration with inability to master certain academic skill	Baum, Owen, & Dixon (1991); Rosner & Seymour (1983); Waldron, Saphire, & Rosenbaum (1987)
Learned helplessness	Baum & Owen (1988); Daniels (1983); Meisgeier, Meisgeier, & Werblo (1978); Schiff, Kaurman, & Kaufman (1981); Whitmore & Maker (1985)
General lack of motivation	Cordell & Cannon (1985); Silverman (1989)
Disruptive classroom behavior	Baum & Owen (1988); Frey (1986); Maker (1977); Sah & Borland (1989); Whitmore (1980)
Perfectionism	Frey (1986); Rosner & Seymour (1983)
Supersensitivity	Daniels (1983); Gunderson, Maesch, & Rees (1987); Maker (1977); Schiff et al. (1981); Tannenbaum & Baldwin (1983); Wolf & Gygi (1981); Vail (1987)
Failure to complete assignments	Baum et al. (1991); Frey (1986); Silverman (1989); Starnes, Ginevan, Stokes, & Barton (1988); Tannenbaum & Baldwin (1983); Yewchuk (1983)
Lack of organizational skills	Barton & Starnes (1989); Baum et al. (1991); Cordell & Cannon (1985); Daniels (1983); Frey (1986); Gunderson, Maesch, & Rees (1987); Sah & Borland (1989)
Demonstration of poor listening and concentration skills	Jacobson (1984); Sah & Borland (1989); Schiff et al. (1981); Tannenbaum & Baldwin (1983); Udall & Maker (1983)
Deficiency in tasks emphasizing memory and perceptual abilities	Daniels (1983); Jacobson (1984); Schiff et al. (1981); Silverman (1989)
Unrealistic self-expectations	Baum & Owen (1988); Daniels (1983); Maker (1977); Silverman (1989); Wolf & Gygi (1981); Whitmore & Maker (1985)
Low self-esteem	Barton & Starnes (1989); Baum & Owen (1988); Baum et al. (1991); Cordell & Cannon (1985); Daniels (1983); Schiff et al. (1981); Whitmore (1980); Whitmore & Maker (1985)
Absence of social skills with some peers	Cordell & Cannon (1985); Sah & Borland (1989); Schiff et al. (1981); Waldron et al. (1987); Vail (1987)
Hyperactivity	Daniels (1983); Tannenbaum & Baldwin (1983); Waldron et al. (1987)

Table 2

Characteristic Strengths of GT/LD Students

Characteristic	Reference
Advanced vocabulary use	Barton & Starnes (1989); Cordell & Cannon (1985); Daniels (1983); Frey (1986); Whitmore & Maker (1985)
Exceptional analytical abilities	Barton & Starnes (1989); Cordell & Cannon (1985); Silverman (1989); Whitmore & Maker (1985)
High levels of creativity	Baum (1984); Baum & Owen (1988); Baum et al. (1991)
Advanced problem solving skills	Silverman (1989); Whitmore & Maker (1985); Yewchuk (1983)
Ability to think of divergent ideas and solutions	Baum et al. (1991); Rosner & Seymour (1983); Yewchuk (1983)
Enjoyment of conversation on complex and challenging subjects	Baum (1983, 1984, 1985, 1988)
Wide variety of interests	Baum et al. (1991); Tannenbaum & Baldwin (1983); Whitmore & Maker (1985)
Good memory	Barton & Starnes (1988); Jacobson (1984); Silverman (1989)
Specific artistic, musical, or mechanical aptitude	Baum et al. (1991); Baum, Emerick, Herman, & Dixon (1989); Baum & Kirschenbaum (1984); Dixon (1983); Silverman (1989); Vantour (1976)
Strong vocabulary skills	Barton & Starnes (1989); Cordell & Cannon (1985); Daniels (1983); Frey (1986); Tannenbaum & Baldwin (1983); Whitmore & Maker (1985)
Strong mathematical skills	Silverman (1989)
Spatial abilities	Baum et al. (1991); Dixon (1983); Silverman (1989)
Task commitment	Baum (1984); Baum et al. (1989); Silverman (1989); Vail (1987)

Table 3

Suggested Instructional Strategies for Meeting the Needs of GT/LD Students

Suggested Strategies	Reference
Provide special enrichment activities	Baum (1988); Baum & Owen (1988); Baum, Emerick, Herman, & Dixon (1989); Cordell & Cannon (1985); Fedorek & Yewchuk (1986); Vantour (1976)
Avoid drill and practice	Baum (1988); Baum et al. (1991); Cordell & Cannon (1985); Frey (1986); Jacobson (1984); Fox, Tobin, & Schiffman (1983); Yewchuk (1983)
Capitalize on student strengths and weaknesses	Baldwin & Gargiulo (1983); Baum (1988); Fox, Tobin, & Schiffman (1983); Maker (1977); Rosner & Seyour (1983); Scruggs,Mastropieri, & Cohn (1982); Silverman (1989); Udall & Maker (1983); Vantour (1976); Whitmore & Maker (1985)
Develop creative abilities	Baum (1988); Fox, Tobin, & Schiffman (1983); Hokanson & Jospe (1976); Vantour (1976)
Multisensory approach	Barton & Starnes (1989); Cordell & Cannon (1985); Daniels (1983); Silverman (1989); Suter & Wolf (1987)
Use role models and mentors	Silverman (1989); Weill (1987); Williams (1988)
Accelerate material	Daniels (1983); Jacobson (1984); Rosner & Seymour (1983)
Use a variety of means to teach factual information	Baldwin & Gargiulo (1983); Daniels (1983); Fedorek & Yewchuk (1986); Fox, Tobin, & Schiffman (1983); Udall & Maker (1983)
Allow for active participation in learning	Cordell & Cannon (1985); French (1982); Rosner & Seymour (1983); Silverman (1989); Udall & Maker (1983); Waldron, Saphire, & Rosenbaum (1987)
Help students develop self-understanding	Daniels (1983); Udall & Maker (1983); Whitmore & Maker (1985)
Develop student interest	Baum (1988); Baum et al. (1991); Cordell & Cannon (1985); Daniels (1983); French (1982); Scruggs, Mastropieri, & Cohn (1982); Suter & Wolf (1987)
Help students develop compensation strategies	Cordell & Cannon (1985); Daniels (1983); Fox, Tobin, & Schiffman (1983); Rosner & Seymour (1983); Silverman (1989); Udall & Maker (1983); Weill (1987)

The most common intervention practices used for students with learning disabilities occur in the resource room or in self-contained classrooms (Taylor, 1989). These service delivery systems allow teachers to work with students in an atmosphere that promotes greater individualization of instruction based on an Individualized Education Program (IEP). In the resource room model, the student with learning disabilities receives specialized instruction in a separate room of the school building. The student still receives the majority of instruction in the regular classroom, and only goes to the resource room for short periods each day. Ideally the resource room model provides educational opportunities for the student to remain with peers in the regular classroom setting, with the intent of avoiding the stigma associated with segregated special education classrooms. This model also provides services to the classroom teacher, who often finds it difficult to provide time to meet the individual needs of the student in the regular classroom setting (Hardman, Drew, Egan, & Wolf, 1993).

Self-contained classrooms are typically reserved for students with severe disabilities. This model makes use of a separate classroom in which to instruct a small number of special needs students through the day. In the past, students in special education classes were excluded from interaction with their nondisabled peers (McCleary, Hardman, & Thomas, 1990). The special education teacher in today's self-contained classroom seeks opportunities to integrate special needs students into mainstreamed academic and social activities (Hardman, Drew, Egan, & Wolf, 1993).

The advent of mainstreaming and the regular education initiative has seen the movement of students with learning disabilities into the regular classroom environment. In this situation the regular classroom teacher provides for the educational needs of the student with learning disabilities. This service delivery system is the least intensive level of intervention and depends upon the classroom teacher's awareness of individual student's needs and ability to meet these needs through a knowledge of appropriate instructional materials and methods (Hallahan & Kauffman, 1988).

Service delivery systems differ greatly between and among school systems (Mercer & Mercer, 1989). Whatever the system, the Office of Special Education (Federal Register, 1977) requires that parents be present at meetings in which the Planning and Placement Team (PPT) decides on placement and considers the instructional planning of the IEP.

Remediation Model

The emphasis of special education programs has been the remediation of academic deficiencies. Typically, students with learning disabilities have been pulled out of the regular classroom to receive remedial instruction, in the area of academic weakness, in a resource room setting. While the resource room provides the environment for remedial services, Meyen (1982) pointed out that the majority of students with learning disabilities receive part of their education in the regular school environment. This requires resource personnel to establish effective lines of communication with the regular classroom teacher in order to facilitate appropriate instruction.

Remedial programs for students with learning disabilities tend to focus instructional efforts in the areas of reading, writing, and arithmetic. This remediation may include the direct instruction of skills in an academic area of diagnosed difficulty (Meyen, 1982). In the case of a student with a specific learning disability in reading, remedial efforts are directed at teaching reading. The remediation of reading, for instance, is based on the assumption that an academic area can be broken down into component skills. The sequence of skills in which a student has demonstrated deficiencies is then analyzed and direct instruction of these skills is provided.

No ideal formula for the remediation of students with learning disabilities exists (Taylor, 1989). However, Taylor (1989) suggested that current practices of special education employ the following principles:

1. Maximize engaged instructional time. Specifically, the more time is spent in direct instruction, the greater the chance for student achievement. Focusing on the time spent on academics, efforts should be on the presentation of the lesson, student demonstration of ability, and appropriate practice with feedback and follow up from the classroom teacher.

2. Provide structure and direction. Historically this is one of the principles most often used in special education (Hallahan & Kauffman, 1988), and remains the foundation for many special education programs today. Since students with learning disabilities demonstrate a lack of structure in some academic areas, this instructional principle supplies structure to avoid overload, to reduce distraction, and to provide the direct instruction of basic academic skills.

3. Individualize instruction. All individuals learn at different rates. This is especially true of students with learning disabilities. The low teacher-student ratio characteristic of special education is a direct result of attempts to meet the educational needs of students with learning disabilities.

4. Teach to mastery. Teaching to mastery emphasizes the fixed level of competency in academic achievement. In order for students to reach this level, individualized instruction and practice of skills are provided.

5. Promote generalization and transfer. Continued drill and practice of academic skills does not guarantee that students with learning disabilities will be able to apply these skills, especially if these skills are practiced in isolation from their usual context (i.e., spelling words for a quiz as opposed to spelling words in the formulation of a sentence).

6. Provide incentives contingent on academic performance. Incentive systems should be tied to pre-performance criteria or academic products rather than to task behaviors. This provides students with an opportunity to realize rewards for academic achievement. Such rewards typically elude the student with learning disabilities in the regular classroom setting.

7. Teach to all deficiencies. Academic skills tend to be cumulative in nature. When individualized instruction targets a specific area of weakness, little improvement may result in other related areas. As an example, when oral reading rate is targeted for remediation, gain scores occur in the target skill with little effect on other skills such as reading comprehension or oral reading accuracy.

An important aspect that has emerged from the research is that high ability students with learning disabilities do not respond favorably to the typical remediation model of special education. Specifically, the repetition of basic skills to ensure mastery has proven ineffective for high ability students with learning disabilities (Baum, 1984; Baum & Owen, 1988; Daniels, 1986; Jacobson, 1984; Whitmore, 1980).

Highly successful adults with learning disabilities have emphasized their potential to achieve rather than stressing the deficits of the disability. Factors such as persistence, self-confidence, the will to conquer adversity, and strong character have been cited as contributing to the success of individuals with disabilities (Maker, 1978). In a recent ethnographic study conducted among highly successful adults with learning disabilities from 24 states and Canada, several themes emerged that increased the likelihood for vocational success. Gerber and Reiff (1991) synthesized these patterns into one overriding factor: the desire and effort to gain control of their lives. The themes that emerged from extensive interviews included: control or taking charge of their lives; the desire to succeed; goal-orientation; reframing or reinterpreting the disability in a positive sense; persistence; goodness of fit between strengths, weaknesses, and career choice; learned creativity or divergent thinking; and a social ecology of support systems, including family and friends. In summary, results of this study provide yet another indicator that individuals with learning disabilities have powerful and provocative insights that bear scrutiny and discussion.

The Development of Postsecondary Services for Students With Learning Disabilities

Colleges and universities across the country are experiencing a substantial increase in the number of students with specific learning disabilities (LD) who are enrolling and seeking services as mandated under Section 504 of the Rehabilitation Act of 1973 (see Table 4). It is estimated that at least 25% of first-time, full-time college freshmen with disabilities possess a specific learning disability (Henderson, 1992). According to the most recent edition of *Peterson's Colleges with Programs for Students with Learning Disabilities* (Mangrum & Strichart, 1992), nearly 1,000 postsecondary institutions provide services. Given the generic nature of the regulations accompanying Section 504, there is great variation in the methods used by colleges and universities to ensure equal educational opportunity and access to students with learning disabilities.

The first comprehensive college program for students with LD began in 1970 at Curry College in Massachusetts through the efforts of Dr. Gertrude Webb (Mangrum & Strichart, 1988). It has been suggested that 90% of the progress in postsecondary service delivery for students with all disabilities has occurred within the past 10 years (Jarrow, 1986). To better understand the range and scope of support services offered in higher education settings, clarification of terminology is important. Shaw, McGuire, and Brinckerhoff (1993) distinguished between support services and a learning disability program. Support services are generally coordinated by a part-time or full-time professional who assists students with LD in accessing a variety of academic adjustments and auxiliary aids as mandated under Section 504. Programmatic and instructional adjustments can include: carrying a reduced courseload, course substitutions (e.g., in the area of foreign language), testing accommodations (e.g., extended time, alternative format, use of a computer), use of tape recorders, and access to taped textbooks. In contrast, a learning disability program is usually staffed by a full-time coordinator or director with expertise in learning disabilities and additional personnel to provide a comprehensive array of services. Diagnostic services, specialized tutorial support, academic and/or personal counseling, and participation by the director in the admissions process for applicants with learning disabilities are among some of the functions served by LD programs. An additional fee can accompany this type of program.

Table 4

Percent of College Freshmen With A Disability, Fall 1991

	All Institutions	2-Year Colleges	4-Year Colleges	Universities	Predominantly Black Colleges
All freshmen with a disability					
Hearing	0.9	1.0	1.0	0.6	0.7
Speech	0.5	0.7	0.4	0.2	0.5
Orthopedic	1.2	1.5	1.1	0.8	0.7
Learning disability	2.2	3.5	1.7	1.0	0.7
Health-Related	1.3	1.4	1.3	1.0	1.8
Partially sighted or blind	2.2	1.8	2.7	2.1	2.7
Other	1.6	1.8	1.7	1.2	1.5
Men					
Hearing	1.0	1.3	1.0	0.7	0.7
Speech	0.7	1.0	0.6	0.3	0.8
Orthopedic	1.3	1.9	1.1	0.8	0.9
Learning disability	2.7	4.4	2.0	1.2	1.1
Health-Related	1.1	1.4	1.1	0.9	1.7
Partially sighted or blind	2.2	1.6	2.8	2.2	3.0
Other	1.8	2.0	1.9	1.4	1.4
Women					
Hearing	0.8	0.8	0.9	0.5	0.7
Speech	0.3	0.4	0.3	0.1	0.3
Orthopedic	1.1	1.2	1.1	0.9	0.6
Learning disability	1.8	2.7	1.4	0.8	0.5
Health-Related	1.4	1.4	1.6	1.1	1.9
Partially sighted or blind	2.2	1.9	2.5	2.0	2.4
Other	1.4	1.6	1.4	1.1	1.6

Source: Astin, A. W., Dey, E. L., Korn, W. S., & Riggs, E. R. (1991). "The American Freshman: National Norms for Fall 1991."

McGuire and Shaw (1989) have proposed a continuum of services which highlights components of different types of postsecondary LD support services. The first category, no services, raises questions about an institution's compliance with Section 504. The second level, decentralized and limited, is characterized as lacking a designated LD contact person with limited services and few established policies. These limited services are often those generic services available to all students on campus. Compliance with Section 504 at these institutions is often monitored by a professional with little or no direct student contact.

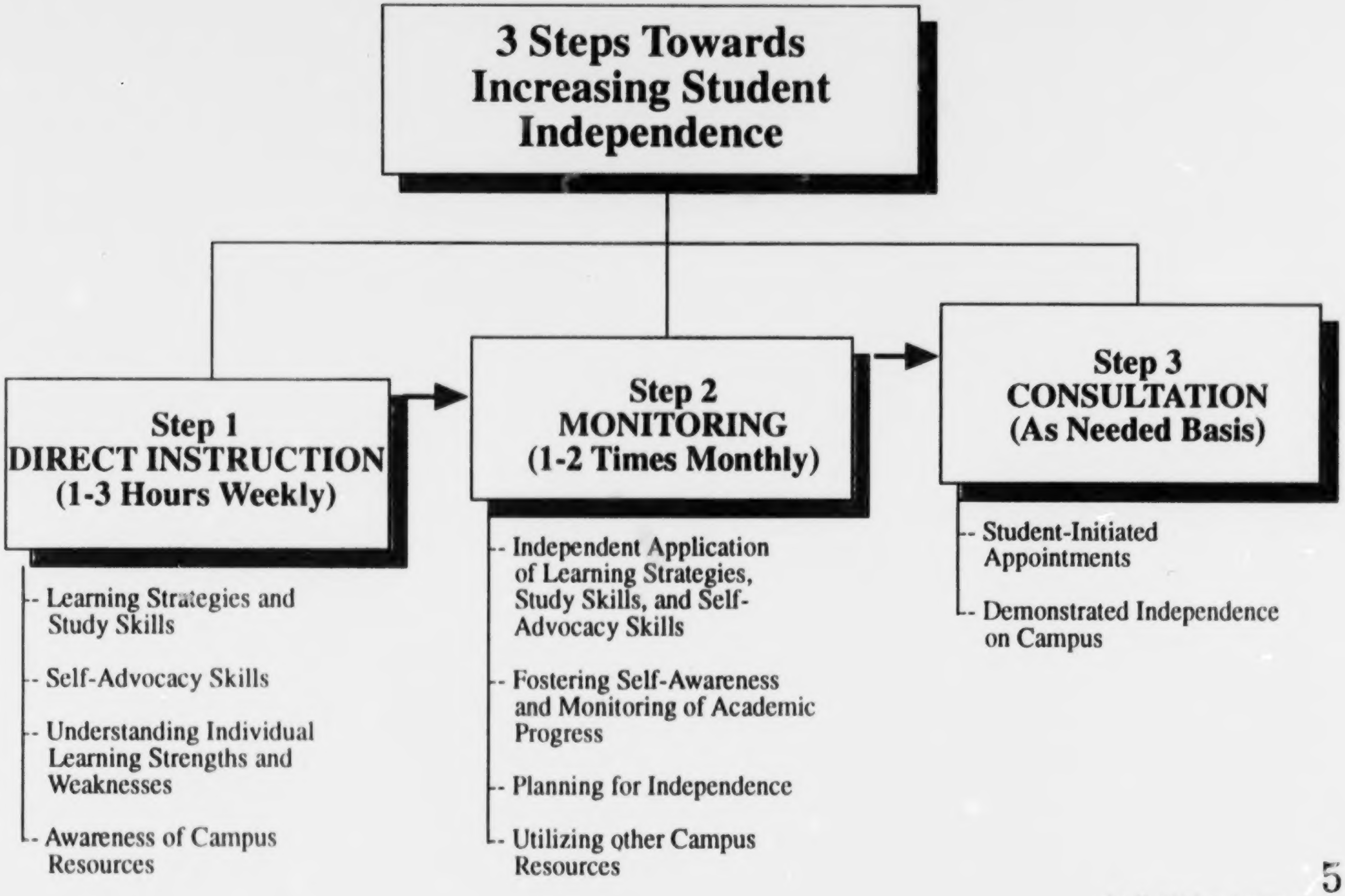
In some settings, loosely coordinated services may exist with a designated staff member who takes special interest in students with learning disabilities. Peer tutors are available and services are often located in the Academic Development or Learning Skills Center. Students are encouraged to utilize other existing campus resources. In response to increasing demands by students, institutions may progress to centrally coordinated services which are frequently offered through the Disabled Student Services Office. Policies and procedures are generally in place and services can include priority registration, assistance in arranging testing accommodations, tutoring, tape recorders, and access to assistive technology. Centrally coordinated offices are usually staffed throughout the year.

The final category, data-based services, is characterized by a full-time director with expertise in learning disabilities. Individualized student plans are developed based upon diagnostic testing, and trained staff work on a one-to-one and/or small group basis on compensatory skills and learning strategies. Typically, decision making is data based and contact records are maintained.

At The University of Connecticut, a data-based program has been in existence since 1984. With a philosophy of assisting qualified students with learning disabilities to become independent and successful learners within the academically competitive curriculum, a Continuum of Services (Litt & McGuire, 1989) (see Figure 1) is offered by The University of Connecticut Program for College Students with Learning Disabilities (UPLD). Participation at any level of the Continuum is voluntary and based upon student self-identification accompanied by documentation of the specific learning disability. Direct instruction consists of an average of two hours of weekly, individualized instruction in learning strategies, study skills, and self-advocacy skills. Emphasis is placed upon student self-awareness of learning strengths and weaknesses and annual goals are established with each student. As students become more confident and competent, they are actively involved in making the decision to progress to Step 2, Monitoring. At this level, students are provided the environment and support to reflect upon their application of skills as well as their progress in their coursework. As they become increasingly independent, students are encouraged to access additional campus resources such as Career Services or the Writing Center. The ultimate goal for every student is Consultation, the level at which any contact with UPLD is student initiated. At this level, students are functioning independently and are able to advocate with faculty about their respective needs for accommodations. With respect to student outcomes as an indicator of program effectiveness, data gathered over the past six years document an overall dismissal rate of 3.7% because of academic deficiency, a strong indicator of student achievement (Brinckerhoff, Shaw, & McGuire, 1993). Most students who participated in this study were receiving supportive services at one of the three levels on the Continuum of Services.

Postsecondary Programs for Students With Learning Disabilities

Service delivery that differs from the university norm can be found in the education of university students with learning disabilities (Shaw, Brinckerhoff, Kistler, & McGuire, 1992). Learning disabilities continue to affect students through adulthood (Buchanan & Wolf, 1986; Masters & Mori, 1986; McCue, Shelly, & Goldstein, 1986). However, the demands and framework of postsecondary education differ from the previous schooling experience. The postsecondary framework requires an autonomy seldom promoted in secondary special education programs. At the postsecondary level, students receiving the support of a university program for learning disabilities often receive encouragement in understanding their specific learning needs and assistance in utilizing compensatory strategies to circumvent academic disabilities (McGuire, Hall, & Litt, 1991).



3 Steps Towards Increasing Student Independence

Step 1
DIRECT INSTRUCTION
(1-3 Hours Weekly)

- Learning Strategies and Study Skills
- Self-Advocacy Skills
- Understanding Individual Learning Strengths and Weaknesses
- Awareness of Campus Resources

Step 2
MONITORING
(1-2 Times Monthly)

- Independent Application of Learning Strategies, Study Skills, and Self-Advocacy Skills
- Fostering Self-Awareness and Monitoring of Academic Progress
- Planning for Independence
- Utilizing other Campus Resources

Step 3
CONSULTATION
(As Needed Basis)

- Student-Initiated Appointments
- Demonstrated Independence on Campus

(Litt, V., & McGuire, J., 1989)

Figure 1. Continuum of services offered by The University of Connecticut Program for College Students With Learning Disabilities (UPLD)

In a study of learning specialists' logs recording the activities of sessions with university students with learning disabilities, McGuire, Hall, and Litt (1991) found five areas commonly addressed in a successful university program for learning disabilities. Study strategies and skills emerged as the overwhelming need of university students with learning disabilities including note-taking strategies, time management, test-taking preparation, and library skills. Note-taking strategies typically are not taught in the regular university curriculum, yet are necessary for the organization of information delivered in the classroom. Although several note-taking methods may be modeled by learning specialists, The American College Testing Program (1989) found that successful note-taking formats incorporate the following components:

- Main ideas in the presented information are highlighted.
- The relationships between the main ideas are shown.
- A system of organization exists for minor points and their relationship to the main idea.
- A format to remind the student of due dates for assignments is present.

Time management was the most frequently occurring objective among study strategies (McGuire, Hall, & Litt, 1991). The use of one-month organizers was consistently modeled and further enhanced by analyzing each week, and possibly each day, to maximize the use of time. This objective is also dependent on the students' ability to self-monitor their activities and make appropriate corrections. Students' self-monitoring of time management must also include extra time allotted to complete academic tasks which fall into the realm of the specific disability.

The skills introduced for test taking directly addressed that component of academic life at the university level. Once again, the actual instruction of test-taking skills is rarely provided in students' educational experience (Bragstad & Stumpf, 1987). Learning specialists facilitated the planning for test preparation, modeled strategies for analyzing multiple choice questions, and suggested methods to reduce test-taking anxiety.

Performance strategies such as written expression, reading comprehension, and mathematical processes were also modeled and facilitated by learning specialists in this study (McGuire, Hall, & Litt, 1991). Written expression was of particular concern and instruction aided students in the development of skills such as the organization of written assignments, proofreading, and sentence structure and mechanics. Learning specialists also addressed the need for the compensatory strategy of word processor use for some individuals.

To aid students with reading comprehension, learning specialists provided modeling and practice in paraphrasing, highlighting the text, identifying main ideas and supporting details, and training in a technique known as SQ3R. SQ3R (Survey, Question, Read, Recite, Review) provides a reading format that promotes an organized approach to absorb written information (Bragstad & Stumpf, 1987). In every instance, content materials from a course the student was taking were used to practice strategies.

Counseling of university students with learning disabilities comprised one third of the learning specialists' instructional time. Topics included academic, personal, and career concerns. Students were also advised of the University counseling services.

Self-Advocacy

Students with learning disabilities may need guidance in understanding their strengths and weaknesses in order to utilize appropriate strategies and advocate for academic accommodations. Self-advocacy involves the realization of these strengths and weaknesses and the students' presenting these abilities as well as weaknesses in interactions with faculty. This self-awareness enables students to advocate for accommodations such as extra time on tests, alternative testing situations, or extensions for assignments. Self-monitoring is a key, as students use metacognition to monitor and adjust for their individual areas of strengths and weaknesses.

Executive Functions, Metacognition, and Problem Solving

Executive functions, metacognition, and problem solving skills all contribute to compensation for high ability students. Executive functions are defined by Stuss and Benson (1986) as "the planning and sequencing of complex behaviors, the ability to pay attention to several components at once, the capacity for grasping the gist of a complex situation, the resistance to distraction and interference, the inhibition of inappropriate response tendencies and the ability to sustain behavioral output for relatively prolonged periods" (p. 158). Denckla (1989) has proposed that school related behaviors within the executive function domain include the abilities of proactive organization to initiate, shift, inhibit, and sustain; to plan, organize and develop strategies or rules. These abilities, or lack thereof, according to Denckla (1989) make a significant contribution to the demonstration of learning disabilities. Executive functions are dependent on the integrity of the frontal lobes of the brain. Interference with executive functioning may not be demonstrated in some areas of intellectual testing, but it may be recognizable as deficits in such metacognitive abilities as planning, organization, and management of time and space (Denckla, 1989).

"Thinking about thinking" is a term which has been used to describe metacognition (Gardner, 1983; Jacobs & Paris, 1987). Metacognition has also been defined as "deliberate conscious control of one's own cognitive actions" (Brown, 1980, p. 453). Cognitive processes involved in self-assessment and self-regulation are attributed to metacognition (Wong, 1986). The apparent deficiency of students with learning disabilities in the process of learning has been examined by Sternberg and Davidson (1986) and Schiff, Kaufman, and Kaufman (1981). Research has suggested that the improvement of learning ability includes the use of metacognition and executive function (Denckla, 1989; McGuire, Hall, & Litt, 1991; Miller, Rzonca, & Snider, 1991; Sternberg & Davidson, 1986). Specifically, executive functioning is exhibited in self-monitoring by the student. Those abilities of planning, shifting, and initiating are necessary for students with learning disabilities to reflect on their own performance in an academic endeavor. Hansford et al., (1987) found higher order thought processes (especially in using strengths over weaknesses) were often used by gifted students with learning disabilities. Research has suggested that the use of metacognition and problem solving skills to process information faster and more effectively are associated with gifted students (Shore & Dover, 1987; Sternberg, 1981). The frustration between understanding the complex and having a disability in the regular processing of information mode has been described in several case studies of gifted students with learning disabilities (Baum et al., 1991; Daniels, 1983; Vail, 1987; Whitmore & Maker, 1985). The utilization of metacognition, therefore, may be a distinctive characteristic of high ability students with learning disabilities (Miller, Rzonca, & Snider, 1991). Gifted students with learning disabilities who demonstrate higher cognitive processes, as well as intelligence testing deficits, may use metacognitive processes to succeed.

Metacognition is exhibited in conscious utilization of compensatory strategies, study skills, and time management by students. Compensatory strategies include the utilization of self-advocacy, or technological aids to circumvent the academic limitations that may be associated with learning disabilities. Self-advocacy involves the self-knowledge or self-understanding of one's strengths and weaknesses (McGuire, 1988). Study strategies involve the use of processes for organizing material in a manner that is accessible to the learner. Study strategies commonly addressed in university programs for students with learning disabilities include note-taking strategies, time management, test-taking preparation, library skills, and vocabulary skills (McGuire, Hall, & Litt, 1991). These study strategies are further enhanced by direct instruction of skills necessary for written expression, reading comprehension, and mathematical operations. Unlike elementary, middle school, or high school settings which tend to stress the direct instruction of curricular-based information, university settings stress the instruction of a variety of study strategies.

CHAPTER 3: Research Methods and Procedures

Qualitative methodology were used in this study. According to Bogdan and Biklen (1982), this involves interpreting and understanding the subjective experiences of an individual's interactions with institutions such as family and schools. Bogdan and Biklen believe that these subjective experiences have an impact on the individual's external actions and behaviors. In other words, phenomenological research investigates the experiences students have in their schools and families and how these experiences influence their external behaviors. In this chapter, the qualitative research approach that was used to obtain information about each subject is explained. Specifically, sampling procedures, data collection, data coding and analyses, and other procedures are detailed.

Selection of Subjects

Sampling Procedure

Due to the nature of the study, purposeful sampling was used. In this procedure, subjects are selected based on their ability to aid in the generation of theory and the data in which theory is grounded. Lincoln and Guba (1985) indicated that purposeful sampling enables researchers to closely examine cases which deviate from the norm in order to "obtain information about unusual cases that may be particularly troublesome or enlightening" (p. 102). Purposeful sampling increases the scope or range of the data collected.

The subjects for this study were 12 high ability university students with learning disabilities. The rationale for the selectivity of the sample is stated in Lincoln and Guba (1985):

> It is likely that, in sharp contrast to the usual situation in conventional inquiry, sampling can be terminated after a rather small number of elements has been included; for example, in interviewing members of some particular group, it is usual to find that a dozen or so interviews, if properly selected, will exhaust most available information; to include as many as twenty will surely reach well beyond the point of redundancy. (pp. 234-235)

Subjects selected for participation in this study met the following criteria:

1. The subject was currently a college or university student or had graduated within the last year.
2. The subject was identified as having a learning disability.
3. The subject would have qualified for a gifted program during elementary or secondary grades based on both IQ scores or achievement test scores, and other indicators of performance.
4. The subjects were currently experiencing success in the university setting.

The program for students with learning disabilities at The University of Connecticut (UConn) described in Chapter 2 and known as UPLD, was used as the primary source for purposeful sampling. The records of all current and recent graduates of this program were reviewed. Students with high ability as demonstrated by intelligence or achievement test scores were selected for intensive scrutiny. An initial pool of subjects included 13 males and 6 females. Each subject received an abstract of the study and a subject questionnaire (included in Appendix A) which were included with a letter about the study in which their participation was sought. Affirmative responses were sent by five subjects immediately and a second mailing was sent to nonrespondents after a two-week interval had passed. Four more subjects then agreed to participate from this pool of potential participants. An interview protocol (see Appendix A) was also developed for subjects based on the review of literature included in Chapter 2. Permission to contact parents of each subject was sought during the initial interviews and received from each subject. A parent interview protocol was developed and is also included in Appendix A.

After the first six subjects were interviewed, it became apparent that the impact of The University of Connecticut Program for Students with Learning Disabilities (UPLD) was a major factor in the success of all participants. Accordingly, a decision was made to locate other high ability students with learning disabilities who were in a college or graduate school that did not have an intervention program to provide comparison case study information. Three new subjects were located who had sought assistance from the UPLD or who had indicated an interest in being identified by the UPLD. One young man, a recent college graduate who was interested in enrolling in a teacher certification program at UConn had contacted the UPLD for information about admission to the university. He subsequently matriculated at a nearby state university and is currently completing her teacher training program. Another woman was identified for this research when she transferred to UConn in her junior year. She asked for information about UPLD and consented to participate in this study before she eventually participated in the UPLD. The third participant, who was not involved in UPLD, was a graduate student in Special Education who was recommended for participation in the study by a colleague in the special education department because of her compensation strategies and her success in the doctoral program.

At the conclusion of the data collection for the 12 subjects, this process was terminated due to what has been called informational redundancy by Lincoln and Guba (1985). Clear trends had become apparent across subjects and no new information was forthcoming.

Multiple viewpoints on a phenomenon, also known as triangulation, enables researchers to obtain greater accuracy of interpretation than any of the viewpoints or data sources considered individually (Guba, 1978; Jick, 1983; Van Maanen, 1983). Accordingly, data for this study were collected using multiple methods: school and university records and testing information, written responses to an open-ended questionnaire, and in-depth interviews with each subject and his/her parent(s). Thus, cross-validation of data sources was achieved by "between-methods" triangulation utilizing multiple methods of data collection.

Instrumentation

Interview Protocol

An interview protocol was developed for this study based on grand tour questioning techniques described by Spradley (1979) (see Appendix A). Open-ended questions were asked about hobbies, school activities, jobs, and interests. School experiences were probed in 14 different areas across each of the periods in which the subject attended school. For example, each participant was asked about his/her academic performance/history in elementary school, junior high school, senior high school, and in college. Participants also were asked about the influences of their family and siblings and about the influence of specific school personnel.

Subject Questionnaire

All subjects completed a questionnaire developed for this study. It was mailed to them and returned to researchers prior to the interview (see Appendix A). This questionnaire included demographic data (e.g., age, sex) and eight open-ended questions about the subject's learning disability, achievement in school, positive and negative influences, and career goals.

Parent Interview Questionnaire

The Parent Interview Questionnaire was developed to acquire parental perceptions of the subject's experiences related to his/her learning disability and academic success in school (see Appendix A). The first section includes demographic information and the second section includes open-ended questions which guided the rest of the interview. Eleven questions served as the preliminary guide to these interviews but the questions were often expanded based on previous responses. These interviews also incorporated Spradley's grand tour questioning techniques and included questions such as, "Tell me about incidents which may have indicated your child was academically able or bright," or "Tell me about your child's elementary school experiences."

Overview of Tests

Wechsler Adult Intelligence Scale–Revised (WAIS–R)

Participants were administered the WAIS–R prior to, or in one case, immediately after their participation in the study. Further information about participants' abilities, learning, and study practices were obtained by other tests described below. The WAIS–R is designed for use with individuals over 16 years of age. It is comprised of verbal and performance subtests and yields three scores: Verbal IQ, Performance IQ, and Full Scale IQ. Wechsler described his conception of intelligence as a global, multifaceted entity. The verbal scale includes these subtests: Information, Comprehension, Vocabulary, Arithmetic, Similarities, and Digit Span. The performance scale includes: Picture Completion, Block Design, Picture Arrangement, Object Assembly, and Digit Symbol. The manual includes extensive information about norms, reliability, and validity. The manual cites that differences of 15 points (one standard deviation) between verbal and performance indicate a statistically significant discrepancy. A difference of 30 points between verbal and performance (two standard deviations) is very rare.

Bloomer Learning Test

The Bloomer Learning Test (BLT) is designed to measure how an individual learns or acquires new information. It consists of a series of independent subtests which are essentially content free and yields three overall learning or cognitive processing scores. Reliabilities of the individual subtests range from .81 to .99 for the adult population and from .93 to .95 for the three full scale scores. The BLT is used to identify the underlying reason(s) for discrepancies between intelligence and achievement in students with learning disabilities which frequently exist. The BLT profiles specific information processing characteristics (e.g., sequential and simultaneous processing, auditory and visual short-term memory).

Stanford Test of Academic Skills, Level 2 (TASK)

The Stanford Test of Academic Skills is designed to yield information regarding a student's performance in a variety of academic areas including reading vocabulary, reading comprehension, mathematics, spelling, and English. Scores are reported according to percentile ranks, stanines, and grade equivalents. The instrument was normed on first year community college students.

Learning and Study Strategies Inventory (LASSI)

The Learning and Study Strategies Inventory is a 77-item, self-report questionnaire designed to gather information about learning and study practices, and attitudes. A 5-point scale is used with responses ranging from "not at all typical of me" (1) to "very much typical of me" (5). Students are asked to rate themselves according to how well the statement describes their patterns of study strategies. The instrument was normed on a college-aged sample and yields percentile scores in each of 10 factors (e.g., attitude and interest, test strategies, selecting main ideas).

Case Studies

Twelve university students participated in this study. Ten attended The University of Connecticut (one as a graduate student) and two attended other nearby state universities for their undergraduate degrees. Demographic information about the sample is presented in Table 5 in which the names used are pseudonyms to protect the confidentiality of the subjects. The majority of the participants in this study were identified as having a learning disability in secondary school. Most of the students in this study were evaluated with the Wechsler Adult Intelligence Scale-Revised (WAIS–R) (Wechsler, 1981); the Bloomer Learning Test (BLT) (Bloomer, 1978); the Stanford Test of Academic Skills, Level 2 (TASK-2); and the Learning and Study Strategies Inventory (LASSI). Comprehensive listings of appropriate evaluation instruments can be found in Myers and Hammill (1982).

The IQ scores of each subject are included in Table 6. These scores were taken from the Wechsler Adult Intelligence Scale–Revised (WAIS–R) and, in several instances, the scores are lower than the IQ scores that were recorded in the subjects' records in elementary or secondary school. It should be noted that IQ scores were only one data point used to document the high abilities displayed by this group.

Information provided by the subjects on the Self-Report Questionnaire is summarized in Table 7 on page 35. Included in Table 7 are self-perceptions of subjects' strength areas, the natures of their learning disabilities, and the grade level when they were identified as being gifted or having a learning disability.

Subject Profiles

Arthur. Arthur is 21 years of age and is tall, dark, and athletic looking. He wears glasses and he reflects an intensity that is obvious as he speaks. He is a sophomore at UConn and is currently enrolled as a psychology major, having switched from physical therapy because of the requirements of the course load. His hobbies are sports and refinishing old cars.

Table 5

Subject Demographic Information

Subject	Demographics			
	Age	Sex	Semester	University Program
Arthur	21	Male	7	Behavioral Psychology
Colin	19	Male	4	Electrical Engineering and Computer Science
Diane	45	Female	Graduate	Ph.D. in Special Education
Evan	21	Male	7	Political Science to Pre-Law
Fred	25	Male	B.A. +	Teacher Certification
Forrest	20	Male	4	Education, English
Jake	21	Male	4	Engineering
Joe	20	Male	2	Physics
Kate	20	Female	4	Liberal Arts
Mike	21	Male	3	Liberal Arts
Martin	19	Male	1	Pre-Allied Health
Peggy	20	Female	4	Music

Table 6

Wechsler Adult Intelligence Scale–Revised (WAIS–R) Scores: High Ability/LD Study

	Scores		
Subject	Verbal	Performance	Full scale
Arthur	128	118	129
Colin	132	139	140
Diane	101	118	109
Evan	136	106	124
Forrest	120	139	133
Fred	120	126	126
Jake	117	124	121
Joe	142	132	140
Kate	103	143	123
Martin	107	129	118
Mike	106	122	113
Peggy	133	104	121

Table 7

Summary of Self-Report Questionnaire Data

Participant	Condition			
	Strength area	Nature of the LD	Time period when identified as LD	Time period when identified as gifted
Arthur	Generally a "B" student	Slow processing of information	4th semester of college	No
Colin	Computer, math, science	Spelling, handwriting, poor short-term memory, reading, decoding	7th grade	Yes, 7th grade
Diane	Sports	Dyslexia, language	college	No
Evan	[None reported]	Spelling, abstract math problems	11th grade	No
Forrest	Not great, but does well in many areas	Dyslexia, concentrating	7th grade	No
Fred	Considered bright, astronomy	math, spelling, social problems	8th grade	No
Jake	Considered self average	Dyslexia, motor skills	6th grade	No
Joe	[None reported]	Verbal and written expression, auditory	3rd grade	Recommended in 6th grade—not identified
Kate	Not really	Language, spelling, reading	2nd grade	No
Mike	[None reported]	Language, spelling Attention Deficit Disorder	10th grade	No
Martin	Deeper insights to life	Dyslexia	1st grade	No
Peggy	Standardized tests, yet "stupid" on homework	Slow thought processes, spelling, penmanship, reading comprehension	5th grade	No

His mother graduated from college with a bachelor's degree in education and his father completed two years of college. His father is currently employed as a banker and his mother is a calligrapher. He has one older brother who does not have a learning disability.

Arthur stayed back in first grade and struggled throughout his school years with both writing and information processing. He was easily distracted and always sensed that there was something wrong with him. His parents requested help and testing for him throughout all of his years in school. He was tested in seventh grade, but because of his high abilities, he was not identified as having a learning disability. His difficulties with information processing continued throughout high school and college. Although he managed to stay in advanced classes in high school, he received Bs only by expending enormous effort. He consistently requested extra time to complete work and grew increasingly frustrated as his classes became more difficult. During his sophomore year at UConn, he had difficulty producing work that both he and his professor believed he was capable of doing in an English class. After asking for more time and extra help, he was referred to the Dean of Fine Arts, with whom he discussed his problem. The Dean then referred him to the UPLD where he received advice and counseling. He was subsequently tested, found to have a learning disability, and services were provided. He is currently receiving direct services in UPLD. Arthur has a girlfriend, seems to be happy in his academic program, and is interested in being trained as a psychologist or market researcher in the future.

Colin. Colin has brown hair and bright brown eyes. He is 5'10" tall, is a sophomore at UConn, and is currently majoring in electrical engineering and computer technology. Both of his parents moved to Connecticut from a large industrial city in New York. Colin's father is an engineer and his mother is a manager of a computer software development company. His father has both a bachelor's and a master's degree in engineering. His mother also has a bachelor's degree and a master's degree in mathematics. He has one younger sister who has not been identified as having a learning disability. Both of Colin's parents describe themselves as having problems similar to Colin's that may be indicative of learning disabilities.

Colin is in good physical health with the exception of asthma which has troubled him periodically throughout his life. He is not employed during the academic year, but he does work in the summer. His hobby, painting miniature pewter figures, developed from his interests in dungeons and dragons.

He is currently doing well in his academic program and has maintained a full load of courses with a 3.7 grade point average. In the UPLD, Colin is currently on the consultation level of the Continuum of Services. Colin began having difficulty in grades six and seven and was identified as having a learning disability in grade seven. He was identified as gifted two years later; however, he did not participate in a gifted program because none was available. He has a very close relationship with both of his parents, who consistently encouraged his interests. They purchased a computer for him when he was seven; he immediately learned to program and by age nine he was re-programming the software games his parents had purchased. At age nine he also began using word processing to compensate for a problem that he recognized but that the schools did not identify until three years later.

Colin speaks rapidly and with intensity. He believes he is not troubled by his learning disability and seems to recognize exactly what must be done in order for him to succeed in the area he has selected. His future plans include an MBA from Wharton and a high-paying CEO position. He was recently designated as a University Scholar in the Engineering department, the highest academic honor that can be attained at his university.

Diane. Diane, who is 45, is the oldest participant in this study. She was identified when an attempt was made to purposely locate subjects who had not participated in a college learning disabilities program. Her father is an agricultural consultant who has a master's degree and her mother is a registered nurse. Diane was an exceptionally healthy child and is an attractive and soft spoken adult. Diane is a doctoral student in Special Education at The University of Connecticut. She had multiple learning problems throughout her schooling and was retained in second grade. She could not read but was not identified as having a severe learning disability until she was an adult. She was placed in a self-contained class for students with mental retardation in junior high school. Her school experiences were so negative and painful that she planned to commit suicide as a senior in high school. She was dissuaded from this decision by a supportive teacher who helped her learn strategies to compensate for some of her learning problems and also helped her to get her first job. Despite her very supportive mother, Diane was often depressed about her own potential and her performance in school. She always believed that "something was wrong with her brain." She had several different jobs after graduating from high school, including carpentry, computer maintenance, photography, and as a teller in a bank. Each time she was offered a job promotion that required reading, she would quit and move on to a different type of job.

She decided, much to her mother's shock, to attend college when she was 35. It was in college that she learned about dyslexia and immediately realized that she had this form of a learning disability. She majored in special education, learned multiple compensation strategies, eventually graduated and began teaching students with learning disabilities. She decided to pursue a Ph.D. and matriculated at The University of Connecticut when she was 42. Her current career goal is to become a college special education professor, specializing in learning disabilities. She is writing a book on her experiences as a person with a severe learning disability.

Evan. Evan is a junior at UConn majoring in political science/pre-law. His sandy blonde hair and freckles emphasize his boyish-looking face. He speaks clearly and exhibits an independent nature through his mannerisms. Evan is involved in a fraternity on the UConn campus, which provides him with opportunities for participating in social events as well as making friends and eliciting both emotional and academic support.

Evan's parents both have college degrees. His mother is employed in marketing and his father is in real estate. Evan is an only child. His father has also experienced problems that are often associated with learning disabilities.

Although Evan had various academic school problems, he was not identified as having a learning disability until his junior year of high school. The discrepancy between his verbal IQ (136) and performance IQ (106) was 30 points when he was tested at the UPLD. He is currently a political science major, but he is interested in going to law school. Evan had problems with spelling throughout school. He was never in an advanced group and often wondered why he had difficulty with certain skills.

Forrest. Forrest is a lanky, 20-year-old with black hair. He has a blotchy skin complexion, stemming from Addison's disease, and a liver condition which is currently controlled by medicine. A sophomore at UConn, Forrest works part time as an usher in the Jorgenson Auditorium, a campus theatre. His mother has attained an educational level that enables her to serve as a financial planner, but never graduated from college. Forrest has had no contact with his father in over seven years. His stepfather is employed as a manager of a computer programming business. Forrest has an older step-sister and a younger sister who do not seem to have learning disabilities.

Forrest began his education in parochial schools. When his earliest problems of not being able to complete his school work began, teachers responded by holding him in class during recess. His mother requested testing from an outside source. A learning disability was diagnosed at a children's hospital in Connecticut. His mother made the decision to withdraw Forrest from school and moved the family to a selected area of Connecticut known for quality education. Throughout his junior and senior high school he received no special education services. The district was aware of the previous testing, however Forrest demonstrated that he could do well in the regular classroom environment.

He was admitted to UConn on the basis of his academic performance and did not utilize the special admission process available to students with learning disabilities. Forrest faced his greatest struggle during his freshman year of college. The onset of Addison's disease symptoms profoundly aggravated his learning disability. Forrest lost his ability to concentrate, and made letter reversals and mistakes in mathematics that affected his academic performance. He could not complete the increased amount of required reading necessary for academic success. Forrest dropped out of UConn but returned after medication was successful in the treatment of his Addison's disease. Forrest is currently on the monitoring level of service in the UPLD. Forrest has made several close friends upon his return to UConn. He is pursuing a degree in education and would like to teach English on the secondary level.

Fred. Fred who is handsome, tall, and somewhat heavy set, is 25 years old and is currently taking classes to receive his certificate as a teacher. He graduated from a state college in New Hampshire with a degree in psychology when he was 23 years old. He married a woman he met in college and moved to Connecticut immediately following graduation. He began having problems in the primary grades and his mother, a teacher who has a master's degree, believed he had a learning disability. Fred's father received a bachelor's degree and is in sales. Fred's parents are divorced and he is quite negative about his childhood experiences and subsequent interaction with his father. He suspects his father may also have a learning disability and believes that this may have led to stricter and more stringent demands on Fred.

> I can't pin down specific people who had a negative influence, but I was very uncomfortable with my father. He would be angry with me for low grades and might indulge in yelling. However when I received good grades, he would not respond with outward happiness but instead say "Well, I expect good things from you like this." Often the punishment of yelling would not be equaled by overt pleasure and I was frustrated that he would never be as happy as he would be disappointed.

Fred is articulate and speaks quickly. He has almost total recall of his childhood and school experiences. He had a concussion as a child and did suffer from mild seizures afterward. Fred had learning problems throughout elementary school and at one point left the public school setting and attended a parochial school.

Fred was a lonely boy throughout most of elementary school and was often teased by his peers because he was different. His verbal precocity, which is still evident today, often resulted in negative feedback from teachers who assumed that anyone as bright as Fred "sounded" should be able to write and read quickly and well. Fred's mother was extremely supportive of him and was his advocate in school.

Fred's goal is to gain the certification necessary to teach in an elementary school setting. He is extremely interested in astronomy and the sciences. He states:

> My goal is to become a elementary school teacher. I hope to work with young children in K-4; not only to provide a strong male role model, but to also spot children with similar problems. I have a lot a patience for working with children because I remember what it was like to not understand it the first time. Perhaps I want to give something back for what was done for me. Perhaps I just want to see a student look at me with that glint in the eye of understanding and use that moment to feel good about myself.

Jake. Jake is 21 years old and is pursuing a degree in engineering. Tall and athletic, Jake is an avid BMX (bicycle) racer. He credits his cycling with teaching him discipline as well as providing him with an opportunity to unwind. He currently holds a part-time job at a local cycling shop. Jake's father is employed with a major computer firm and his mother is a teacher in an elementary school. Both parents have college degrees. His father was transferred to France when Jake was in junior high. Jake adapted well and became fluent in conversational French.

Jake's reading problems became apparent in sixth grade. Testing followed and he was identified as having dyslexia. His high IQ scores prevented the school system from providing him with complete special education services, as it was assumed he could not really have learning problems if he was so bright. These same IQ scores led to a nomination for the local gifted education program, but his family's move to France prevented his entry.

Jake has experienced many high and low points in his academic career. He is currently taking a reduced course load in this, his fourth semester, at UConn. Jake is on the monitoring level of services at UPLD and is seeking the specific aid of a math tutor. Jake wants to complete his degree in mechanical engineering and find a job with a company that will allow him to use his creativity.

Joe. Joe is a tall, heavy set, intense looking young man with dark curly hair, a beard, and glasses. He was a junior who was a physics major when this study was conducted. His father is an attorney and his mother, who has a bachelor's degree in English, conducts title searches for a law firm. She stayed home when Joe was in school. Joe has one older brother who is pursuing a doctorate.

Joe never really had to work in school because he learned quickly. His verbal IQ is over 140 and yet his problems in school began at a very early age. In fact, he had so many learning problems in the primary grades that he was placed in a self-contained, special education classroom for students in grades two through six. During his time in this self-contained classroom, Joe was instructed along with students with mental retardation, emotional or behavioral disorders, or who had specific learning disabilities. He became severely depressed. About this time in his education, he recalled: "It was degrading. I was very resentful of it. I don't really remember that part of my life that well. I've blocked it out. I knew I was different than the other kids." Joe was retained in fifth grade while in the self-contained special education class. He described this by saying that he had become a disciplinary problem while he was in the classroom. Joe's memories of the class were very negative: "They used to send us out to recess with the mainstream kids. I remember being sort of alone and being made fun of. They called me retarded."

Joe recalled that school personnel released him from the special education class in sixth grade because they considered him "cured." "I was the first student to be completely mainstreamed out of the program in its history. The principal used to come down and observe me and they would bring visitors from here or there to talk to me."

These are not the only negative experiences that occurred in Joe's education. On his subject questionnaire, when asked if he was ever identified as gifted, Joe wrote, "I was told that I should have been placed in a talented and gifted class in 6th grade. After taking the entrance exam I was told that I only failed by a few points."

Although very involved in a university learning disabilities program, it is now questionable whether Joe will finish college as he was on academic probation due to required liberal arts courses he had to take outside of his major area. At the current time Joe has dropped out of his university program. He carries a great deal of anger about what happened to him in school, particularly his elementary school years, which impeded his educational performance.

Kate. Kate is an attractive young woman with a light complexion and blonde hair who is a sophomore in a liberal arts program at UConn. She has two older siblings who have not been identified as having a learning disability nor completed college. Her parents were both born in a different country, and she strongly suspects that her father, who is a carpenter, has a learning disability. Her mother is a waitress. Kate was identified as having a learning disability in second grade and was involved in learning disability programs in her public school system throughout elementary and secondary school. Her learning disability is in language processing and short term memory.

Kate is in excellent health and is pursuing a degree in liberal arts and plans to major in psychology. She wants to attend graduate school and earn an advanced degree in psychology in order to enable her to counsel other students with learning disabilities. She carries a full course load (12 credits) and has a good (3.0 on a 4 point scale) grade point average. Her experiences in the various learning disability programs in the public schools were occasionally positive and often negative. She is currently on the monitoring level in UPLD.

She has considerable drive to complete college because she wants to be the first in her family to graduate from college. Kate is highly motivated but struggles to overcome her learning disability and succeed in an academic setting.

Martin. Martin was 19 and was a second semester freshman when he participated in this study. He has blonde hair and blue eyes, and was intensely interested in this study. He was very calm and quiet and did not seem at all uncomfortable in the interview. He wants to be a physical therapy major and is interested in antiques. He is very religious and mentioned his church a few times. His mother is a housewife who graduated from nursing school. His father, who graduated from The University of Connecticut, is an insurance executive.

Martin is the second of four children. He has one older sister and two younger brothers. One younger brother has been identified as having a learning disability and Martin believes his father also has a learning disability. Martin was identified as having a learning disability in first grade and, according to him, was retained because of his learning problems. He credits his parents' intervention and "continued demand for a higher level of output from my school work" as his greatest positive influence. Martin's father asked to be involved in the parent interview and was the only father who requested to be interviewed. He was actively involved in Martin's education and helped locate numerous resources for Martin. He also realized the school district's problems regarding his son's learning disability and sought alternatives for Martin outside of school. He eventually located a summer camp for high ability students and enrolled Martin. This seemed to be a turning point for him.

One of Martin's greatest frustrations was his continual placement in low-tracked classes in school due to his learning problems. He takes full advantage of the UPLD program and currently has a 3.5 grade point average.

Mike. Mike is tall, has dark hair, and is 21 years of age. He is currently a sophomore at UConn, and is the second of four children, born to a physician (father) and a nurse (mother). He was a history major at the time of the study. He had learning problems throughout school and stayed back in seventh grade, but was not identified as having a learning disability until his sophomore year of high school. He consistently received Cs in school until this time. He was finally identified because his mother took him to a hospital in Connecticut that has an excellent reputation for assessing children. As a result of this assessment, he was labeled as having Attention Deficit Disorder (ADD) and a learning disability. He regarded the diagnosis of ADD and LD quite negatively:

> I thought of it then as being almost retarded. That's the way I looked at it. Well, not retarded, but I didn't want to be labeled as someone like that. Because I had friends in high school who were in that, they call it "the closet." It's a room about this big and the kids with learning disabilities would come and spend a lot of their time there and I. . .and all my friends who were in there were really not bright kids at all.

Mike's parents were frustrated with the inability of the school district to help him. He had a relatively high IQ, yet his academic performance was poor. All of his friends were in the talented and gifted program and Mike seemed to be just as bright, but did not achieve in school.

Mike is taking a full course load and is currently doing extremely well. He was interested in being a history major, but is now unsure about his plans because he doesn't get high scores on his history exams. He explained:

> I'm so totally blank about what I want to do. Still haven't found my, what kind of courses I love and that's what I think, when you're choosing a major, it's got to be something you really like. I was starting to lean towards history and then I got so discouraged when I got my test grade back. Like if it's something I really love, how come I can't do well in it?

At the time he was interviewed, Mike indicated that he would like to own a bar or restaurant when he finished college.

Peggy. Peggy is a tall, vibrant looking young woman who is 20 years old and a junior at UConn. She is extremely verbal and speaks quickly and with great intensity. She is a voice major who aspires to a career in opera. Both of her parents graduated from college with bachelor's degrees. Her father is currently an engineer and her mother is a homemaker. She has three siblings, two older and one younger, and both her older sister and her younger brother have learning problems. She carries a full course load and has an extremely high grade point average in her major area (music) which is sometimes lowered by grades in other subjects which she must take because of university requirements.

Peggy had very negative experiences in elementary school and was frequently punished for not finishing her work. She was tested for learning problems but was so verbal and had such high standardized achievement test scores that a learning disability was not identified until fifth grade.

She usually earned average or low grades and had a difficult time rationalizing her high standardized tests with the amount of time it took for her to complete her work. The learning disability programs that she was enrolled in during elementary, junior, and senior high school were quite variable. Peggy was eventually told she no longer had a problem and was dismissed from the learning disability program. One event helped her to become more positive about school:

> One positive event was being allowed into an honors level class both in eighth grade and my sophomore year in high school. I wasn't allowed into most honors classes that I wanted to take. I also had a few teachers, especially as I got older, who believed in me and helped me reach my potential. My father helped me study and a good friend made me change my attitude about school the summer before my junior year. Before then, I hated school because I was overwhelmed by it.

Because of her negative experiences with LD programs in the public schools, Peggy was reluctant to seek assistance from UPLD at The University of Connecticut where she had transferred in September of her junior year. As a result of her participation in this study, she sought assistance, was formally tested and is currently receiving direct services from UPLD.

Data Collection, Coding, and Analyses

Data collection refers to the finding, gathering, or generating materials that are then analyzed (Strauss, 1987, p. 20). In this study, in-depth interviews were conducted with participants and parents, questionnaires were completed by participants, and school and university records were carefully viewed. Interviews with participants and parents were tape recorded and transcribed, producing several hundred pages of transcriptions. These data, the accompanying field notes derived from the researchers' responses during and following interviews, as well as the examination of multiple documents and testing information from student files, were used to triangulate sources. Since the goal of this study was to generate grounded theory, additional sources of data were often sought. Parent interviews were used to provide additional sources of data as were document reviews. Strauss calls this use of supplementary data collection "slices of data" (p. 27), explaining that "different types of data give different views or vantage points, allowing for further coding, including the discovery of relationships among the various categories that are entering into the emergent theory."

Types of Coding

The coding paradigm suggested by Strauss (1987) was used in this study. Data were coded for relevance to specific phenomena within a given category for: conditions, interaction among the actors, strategies and tactics, and consequences. Three types of coding described by Strauss (1987) were used in this study.

Open Coding

The initial type of coding, known as open coding, involves unrestricted coding of all data by the careful scrutiny of field notes, interviews, or any other documents. In open coding the researcher tries to identify concepts that seem to fit the data and "open up" the inquiry (Strauss, 1987, p. 29). At this point, the researcher attempts to remain open and code by the data as well as the experiential background the researcher may have and the body of literature which has been reviewed.

While involved in open coding, the researcher consistently analyzes whether the data are pertinent, and what category various incidents indicate. In open coding, data are analyzed minutely and coded in order to verify and qualify the theory that is emerging. During open coding, the researcher often interrupts the coding to write theoretical memos. In open coding, individual codes emerge and initially may be plentiful. As the researcher attempts to verify codes and determine relationships among and between codes, a determination is made about the relationship of a code to a category.

Axial Coding

After initial categories are determined, axial coding enables the researcher to intensely analyze one category at a time in terms of the coding paradigm discussed earlier (i.e., conditions, consequences). This enables cumulative knowledge to emerge about relationships between that category and other categories. Axial coding rarely occurs during the early stages of open coding but becomes more dominant after initial data are collected and analyzed. Axial coding can occur during the latter stages of open coding, often being done alternately while open coding continues. In this study, for example, the following areas were originally coded as separate categories: peer problems in school, placement in low-tracked classes, negative interaction with teachers, retention in a grade, placement in a self-contained special education class, difficulty in reading and writing, inappropriate learning disability program, poor self-esteem, and a lack of confidence. In the axial coding stage, it became apparent that relationships existed between and among these concepts, and they were eventually merged into a category labeled Negative Experiences in School. Axial coding enables the researcher to specify relationships among the many categories that emerge in open coding and ultimately, results in the conceptualization of one or more categories selected as the "core."

Selective Coding

When a researcher codes systematically and purposefully for the core category, selective coding occurs. In this stage, a core category is selected and coding is conducted to limit coding only to those areas which relate to the core category. The core category "becomes a guide to further sampling and data collection" (Strauss, 1987, p. 33). In this study, the specific negative school experiences discussed earlier were identified as categories as a result of the first few interviews in the earliest stages of open coding. They were grouped as one category in axial coding and later became a core category in this stage of selective coding. Since negative school experiences emerged early, the researchers were able to collect additional data that addressed the coding paradigm. For example, asking about grade retention (or staying back) was not planned in the initial interview protocol. However, after two or three participants indicated that grade retention was a negative school experience, this question was asked, interaction about this experience was sought from key players and the consequences of this action was discussed with all subsequent subjects and all parents. During selective coding, the conditions, interaction among the actors, strategies and tactics, and consequences are sought and coded.

Strauss (1987) described the emerging categories as two types: sociological constructs and *in vivo* codes, which are described as taken or derived from the language used by the participants. The participants use certain terms to describe their situation and how to resolve or process their problems. *In vivo* codes are useful both analytically and for imagery. In this study, *in vivo* coding was extremely useful in creating images of the negative school experiences of some of the participants. An image of the learning disability classroom in a high school as "the closet" or of a participant being teased by her peer or punished by a teacher often appeared through *in vivo* coding. Sociological codes are formulated by the researchers' scholarly knowledge and the knowledge of the field under study. Sociological constructions are broader, and are usually based on social science concerns.

Core Categories

In the development of grounded theory, a goal is the generation of theory that accounts for behaviors. A core category accounts for most of the variation in a pattern of behavior. Researchers using the methods of data analysis discussed by Strauss (1987) consciously attempt to identify a core category while coding data. Various core categories should be labeled provisionally, and then an attempt should be made to theoretically saturate those categories which may explain the problems or questions being addressed. At this point, the relationship among categories are examined to determine the saturation of categories in the identification of the core category. Strauss (1987) suggested the use of memos in order to identify the core category by its relationship to other categories. The following criteria, suggested by Strauss (1987), were used in this study to verify the use of negative school experiences as the core category in this study.

1. It was a central core related to most other categories more than any other category.
2. It appeared frequently in the data.
3. It related easily to other categories.
4. It has clear implications for a more general theory.
5. As the details of the core category emerge through analysis, the theory advances.
6. The core category enables the researcher to build maximum variation to the analysis as the researcher uses the coding paradigm discussed earlier (e.g., conditions).

Coders and Core Categories

In this study, two of the researchers coded all data. One researcher coded participant interviews, and another coded parent interviews. Both individually coded the questionnaires and other documents. Additionally, each researcher coded one interview initially coded by the other researcher to verify codes. An inexperienced team of undergraduate honors students spent several hours examining the selective coding completed once the core categories were determined. These guidelines parallel those suggested by Strauss (1987).

In this study, negative school experiences and the integration of personal traits and learned strategies necessary to succeed emerged as core categories for participants. Core categories for parents were overlapping, including negative school experiences and the various types of parental support necessary to enable these students to succeed.

Integrative Diagrams

The coding and memo writing described by Strauss (1987) were used in this study and resulted ultimately in the categories being kept in analytic focus throughout the data collection and coding process, and the subsequent creation of successive operational integrative diagrams (Strauss, 1987, p. 70). According to Strauss, integrative diagrams serve several functions including the integration of what is known, contributing to analytic security, stimulating the researcher to follow through on the implications of the diagram, clarifying what is not known and finally, acting as a touchstone allowing the researcher to relate new advances to previous analysis. The integrative diagram depicted in Figure 2 (in Chapter 5, p. 103) emerged after numerous drafts. This integrative diagram is based upon the coding paradigm discussed earlier, the core categories, and the associated memos that were written during coding.

The Development of Grounded Theory

Strauss (1987) and Glaser (1978) indicated that the term "grounded theory" evolved from an emphasis on the generation of theory and the data in which theory is grounded. Accordingly, all of the steps in the collection, coding, and analysis described in this chapter were involved in the organization of the ideas emerging from data analyses into a complex, conceptually woven, integrated theory. According to both Strauss and Glaser, this theory is discovered and formulated in developmental stages in conjunction with the intensive analyses of data. The grounded theory that developed from this study is presented in Chapter 5.

Internal and External Validity

The construct of internal validity is concerned with the possible distortion of research findings by extraneous variables, that is, to ensure that the research is reliable. Qualitative research is susceptible to the internal threats of history, maturation, and instrumentation, according to Borg and Gall (1989). However, Borg and Gall point out that qualitative researchers use somewhat different strategies to deal with threats to internal validity. Lincoln and Guba (1985) suggest the use of credibility as a substitute for internal validity. Credibility can be achieved through prolonged engagement, persistent observation, and triangulation (Lincoln & Guba, 1985).

Two issues arise that could threaten the credibility of this study: the reactive effect on the parents and subjects to the interviews on this potentially sensitive subject, and the potential for bias on the part of the researcher.

To counter the possible bias in the teacher and parent interviews, several strategies were utilized. Two researchers interviewed the subjects using tape recordings and field notes which were later coded separately and then compared. The subjects, teachers, and parents were camouflaged in the text of the study. Statements recorded from both parent and subject interviews were checked against data collected from relevant documentation. This second strategy used triangulation to identify possible inconsistencies in participant interviews.

The possible threat of researcher bias was addressed by guidelines suggested by Lincoln and Guba (1985), Marshall and Rossman (1989), and Patton (1990). A constant search for negative instances, seeking out alternative hypothesis, value free note taking, and research field notes were used to record appropriate impressions during interviews. A further check included the challenging of the researcher's analysis by novices in the education of the gifted and in special education playing the role of "devil's advocate."

External validity of qualitative studies, or the extent to which the findings can be generalized to the larger population from which the sample was drawn, is questioned by Borg and Gall (1989). Likewise, Lincoln and Guba (1985) respond with the recommendation of transferability as the qualitative counterpart for external validity. In this study the terms giftedness and the presence of learning disabilities were used to describe a collection of representative characteristics or behaviors that can be manifested simultaneously in the behaviors of the subjects. The researcher utilized "thick" description to document this duality of behaviors. "Thick" description enables subsequent researchers of the phenomena of gifted students with learning disabilities to determine the relevancy of this study to a second setting.

The triangulation of data sources strengthens the generalizability or transferability of a study. This use of data from a variety of sources serves to "corroborate, elaborate, or illuminate" the study under investigation (Marshall & Rossman, 1989). The combination of triangulation with multiple case studies of subjects from a variety of settings greatly strengthens the study's usefulness and transferability (Patton, 1990).

Additionally, the criteria recommended by Strauss and Corbin (1990) to evaluate the validity of the research process and grounding of the study were employed. These criteria, described in Chapter 1 served as guidelines throughout data gathering, analysis and theory formulation.

CHAPTER 4: Results and Core Categories

The findings discussed in this chapter are divided into four sections. The first involves the core categories which emerged from the participants and the second, the core categories that evolved from their parents. The core categories for participants include: (1) negative experiences in school, and (2) integration of personal traits, environment, and learned strategies necessary to succeed. The core categories for parents include: (1) negative experiences with school and (2) the types of parental support necessary for high ability students with learning disabilities to succeed. In the third section, the research questions that guided this study are addressed.

Participant Categories

Negative School Experiences and Teacher Interaction

During the interviews, all of the participants recalled negative, and in many cases, painful memories of situations that had occurred during their elementary and secondary school years. For many of these students, the discussion of these school memories was troubling and several indicated that they tried never "to think about what happened to them in school." In some cases, they admitted to "blocking out" memories of painful events that they would rather forget, but each was able to "dredge up" these incidents during the course of the interviews. As Joe eloquently summarized,

> I still have a lot of emotion about it. I had a lot of mistreatment. It [this interview] conjures up memories of things that I don't like to meet.

It should be noted that some of the negative school experiences that these students encountered were quite harsh including: repeated punishment for not completing work on time, retention [repetition] of a grade, placement in a self-contained special education class in which the majority of students had mental retardation, and cruel treatment by peers and teachers. In fact, if these and other school experiences were not related over and over by many respondents, one might consider them to be rare, almost accidental happenings. But they *were not rare*, and indeed, these affected all of the students in this study, and in almost half the cases, painful memories and wounds still remain, unhealed.

Sadly, as Peggy indicated, this group tended to remember the negative experiences more vividly than any neutral or positive experience.

> I tend to remember the bad teachers better than the good ones. My third grade teacher was a good teacher. It was a combination 3rd and 4th grade classroom, and we did a lot of interesting things in there.

This comment was made in the middle of a very emotional discussion of difficult experiences she had encountered in both second and fourth grades.

Late Identification as Having a Learning Disability

As indicated earlier, eight of the twelve respondents were not identified as having a learning disability until middle school (grades 6-8), high school, or college. The three students who were identified early either had such severe learning problems that it was difficult to ignore the problem, or had parents who knew "something was wrong" and became strong advocates. Kate recalled specific details of the testing situation and her first memories of her realization that she had a learning disability.

> I was always brought into these rooms and someone really sweet and talking slow, like I was an idiot, tested me, and I would go through the test with tears in my eyes. I mean, I was really upset. I knew something was wrong when I was in kindergarten, because I couldn't, I only knew zero and one. I didn't know any other numbers. I didn't know the alphabet. I didn't know colors. I knew there was something wrong, because I was pulled aside and asked a bunch of stuff, and I couldn't answer it.

Mike, who was identified as having learning problems and was retained in first grade, believes he was identified young because of his parents' advocacy efforts and because his father also had a learning disability.

The late identification was problematic for the participants in this study in many ways. First, although they were not identified until their later years in school, their academic difficulties began much earlier. Accordingly, because they had difficulty reading, writing, spelling, or with handwriting, they were often criticized, punished, or told to work harder. Most of their teachers realized they were bright and many of the participants had superior oral skills that were not matched by their written or reading skills. This resulted in several teachers urging these students to "shape up" and "work harder." Because of this pressure, some learned to work hard. For example, Arthur described himself as a student in this way:

> Diligent, I cared about my grades, I have always been very persistent. I work slow. It's a good thing with me, working slow. Through high school before I knew anything was wrong, I thought I just wasn't working hard enough and I could get the As, if I really just put my time in it.

Unfortunately, others were quite adversely affected by the criticism and the constant urging to work harder. Diane always believed her learning problems were her fault.

> D. I never talked about my work to anybody because I knew it was my fault that I couldn't learn. I just had to work harder. Even my father, when he saw my IQ score said, "You need to try harder."
> S. You never thought that you had a problem?
> D. No! It was always me. I didn't get it or I didn't work hard enough or I didn't try hard enough. I still think that sometimes. . . .

The late identification also caused participants to wonder what was wrong with them. Arthur, who was not identified as having a learning disability until he sought help in college explained:

> A. I always knew inside that I was smart enough, I just couldn't seem to figure out how, so then I finally went through all the administrative things to research how I could, because I used to use counseling services and I even tried the Mental Health Center once and they didn't do anything to help me, it was all for like average students who needed to just be there or how to read the textbook or something.
> S. So you knew, I mean they had to know down deep inside, that you had this problem and you had to keep seeking solutions.

> A. I didn't know if it could be fixed, but I kept trying to find the solutions. . . . I just knew from all my attempts that it wasn't a normal problem.

Parents had often told their children that they suspected a learning problem or a learning disability had caused their difficulties in school. Fred's mother, a teacher, recognized the problem early:

> My mother was the first to notice [my learning disability]. She recognized it when I was 5 years old.

However, even though his mother believed that learning problems existed at a very early age, Fred was not formally identified and provided with services until he was in eighth grade.

When students were finally identified as having a learning disability, they indicated that their parents were relieved, and sometimes angry or guilty. Evan explains:

> My parents knew something about learning disabilities and when it was brought up, they weren't surprised and they were kind of glad.

Arthur's mother had suspected for years that he had a learning disability, but he was not formally identified until college. He explains:

> My mother was very disappointed, she also felt guilty. Because I had been evaluated in seventh grade because of my seeming intelligence and problems in school. I scored super high on the cognitive and the logic. My mother had me taken to a psychologist for that and then she met with the people in the school and they said they couldn't put me in the learning disability program because I was too smart. They had nothing for me.

Arthur was denied access to the learning disability program in his school because he was "too smart." He was never identified as having a learning disability by any of the school personnel. Similar problems existed for other participants as well. The duality of the high ability which often allowed the student to do well on the standardized tests in IQ assessments often "cloaked" the learning disability and produced confusing and intensely difficult times for the persons in this study. Peggy explained:

> The school psychologist said it was obvious that I was not *truly* learning disabled because I tested so well on the standardized achievement tests. He went on to tell me that I had an "anxiety-induced learning problem" and I would grow out of it.

In the assessment process, several students were told that they had scored very high on IQ tests and two were either nominated for a gifted program or actually identified as gifted. That produced interesting reactions. Explains Jake:

> In 7th grade, they said I was really intelligent, but I was like well, you know it doesn't mean that much if I can't do the work.

Mike had a similar experience:

> Everybody always told my parents I was bright and I was hyperactive. They just thought I was smart and had a discipline problem.

After his identification as having a learning disability, Mike worked harder. He explains:

> Once I was identified, I felt like I had to prove something. So if you have any records of my grades, you'll see the sophomore year when I found out, my grades were poor but that in my junior and senior year after I was identified, I had all As and Bs, because I felt like I had to prove something.

Self-Contained Special Education Classes

Some of the participants were placed in self-contained special education classes that they perceived were primarily intended for students with mental retardation and students with emotional and behavioral disorders. This experience was traumatic for Joe:

> J. Yes, it was a special, it was entirely a closed classroom. There were 11 of us. I think 4 or 5 were disciplinary problems. Some had Down's syndrome and the rest of us were learning disabled or had other sorts of problems.
> S. How long were you in the classroom?
> J. I think I was in for 3 years—I stayed in 5th grade for 2 years and they sent me to a regular class for the second half of sixth grade.
> S. You repeated fifth grade? In this room?
> J. Yeah.
> S. How did you feel about being in a class with other special education students?
> J. Upset.
> S. Because?
> J. It was awful, it was degrading. I was very resentful of it. I don't remember that part of my life that well.
> S. Why?
> J. I blocked it out.
> S. Why did you stay back?
> J. I think it was a disciplinary thing.
> S. Were you a discipline problem?
> J. I wasn't before I got into the special class.
> S. How did you feel during that time?
> J. Well, they used to send us out to recess, "they mainstreamed us" with all of the other kids. I remember being alone and being made fun of.
> S. How?
> J. Well, kids threw rocks at me and called me names.
> S. What kind of names?
> J. Mostly, "retard."

Joe's experience differed from Diane's, who was also placed in a self-contained special education classroom.

> D. I believed I was just plain dumb. What really clinched my believing this happened between 6th and 7th grade. I remember being so excited about going to junior high school because it was in a different building with other kids. I was really psyched to do this, and they started to test me, and when I got to the 7th grade they had put me in a self-contained room for mentally retarded kids. And I was really upset about that. After about 2 weeks, I thought this was the greatest thing that ever happened to me, because I was like the star student, and I got to go around and help all the other kids, and I got the best marks. Then they figured they had done all the testing wrong

and everything, and they called my folks in, and I remember my dad getting really upset. They said, "Gee, she's got a really high IQ." And so they moved me back to a regular class.

S. So they realized in the 7th grade that you had a learning disability.

D. Right, and they said that when they called me in to tell me that there was a reason why I wasn't doing well. I thought it was a big excuse, and they were trying to get me to do things, that there really wasn't anything wrong. It was just that they were trying to get me to do all this stuff that I couldn't do, so I said, "They're just trying to tell me that I am smart, *but I am not really*" [italics added].

This theme of lowered self-concept occurred repeatedly for many of the participants. Because the majority of the participants were not identified as having a learning disability until they attended secondary school, they spent their previous years in school being told they were lazy, and that they could achieve if they worked harder. These admonishments sometimes resulted in lower self-concepts and a lack of self-confidence about their own abilities. Fred, who was also placed in a special education class, was calm and accepted his placement.

F. In junior high school, I was placed in a special education class for part of the school day.

S. Was this a special education class with students with all different types of needs or was this a learning disability program?

F. You know, this is going to sound silly but I never noticed. I never really noticed if the students were mentally handicapped or learning disabled like me. I guess I just didn't really care. I mean they were kids in school. I was surprisingly accepting of all other kids considering all of the times that I had been put down, I wasn't about to put anybody else down.

Peggy, who was also placed in a self-contained class, believed that no plans were ever made for her and reflected that she never understood the purposes of the intervention.

> I never understood what they (the school system and teachers) were doing. They sent me to special education classes but they just said, you are going to do this—and they did not really say what they were trying to do with the classes. I don't remember a lot about the classes. I worked on a computer and did some reading comprehension work. There were mentally retarded students there, too. . . .They would flash letters on a screen and I would have to pick out a letter and say how many times I had seen it.

Retention

Half of the participants in this study were retained and, accordingly, repeated one grade. This usually occurred because reading or writing skills were not mastered or in some cases, behavioral problems developed as a result of frustrations faced by the participants. Some of the subjects were angry about the experience, believing their retention was caused by teachers not recognizing their learning disability and some accepted what happened with seeming complacency. Diane explains her retention:

> I stayed back in 2nd grade—So now, I was both bigger and dumber.

When asked about her reactions to staying back in second grade, Diane displayed anger.

D. I didn't do anything. I just sat back because I was *so* angry.

S. This was your second year in second grade?
D. Right. I didn't do anything. It was like I sat like this, and when they asked me a question, it was like, "You think I am dumb? I will show you how dumb I am."

One participant was relieved by being "kept back in first grade" because he was embarrassed that he couldn't do what his peers could do. Mike explains:

M. I was kind of thankful because I couldn't read in class, and I felt like a real dumbbell.
S. So you stayed back and repeated first grade. Same teacher? Different teacher?
M. Different teacher.

Mike believed he was retained because of his learning disability:

S. Why did you stay back?
M. Because I had a learning disability.
S. You stayed back because of the learning disability?
M. Yeah.

It is interesting to note that the participants who were retained believed they had not benefited in any way from this practice, as it did not address the learning problems they were experiencing in school that had caused them to be retained.

Negative Interaction With Certain Teachers

All of the subjects recalled negative experiences with some of their teachers. All of them could specifically remember at least one teacher, and most could remember more, who had been a very negative force in their schooling. Some teachers denied opportunities that would have enabled the participants to use various compensation strategies that they needed to use to be successful in school. Arthur explains:

> Some of my teachers were awful to me. I remember one English teacher. To this day, I hate her. She would just have the idea that if I couldn't do it, if I couldn't get an essay exam done in the time, then I just didn't deserve extra time. . . .That was the hardest English course I'd ever had, you know, because I couldn't do the work in the allotted time. Because of the essays. . . .

Some teachers used various forms of punishment when participants could not do their work in a similar style or pace as their peers. Peggy states:

> In second grade, I hated my teacher. It was a terrible year and she was a terrible teacher. I thought I must be stupid, because I couldn't do any of the work that everyone else in the class was doing, and the teacher was constantly yelling at me for not being able to do the work, and setting me up as an example in front of the class as someone who couldn't do the work, and told me that you know, that I better shape up and start doing it, because I just was not [sic]. In fourth grade I had another terrible teacher who used to keep me after school when I couldn't get my times table test done, or when I would get a bad grade, when I wouldn't hand in homework, and that was not good. We had a times table test, and you had to pass. You had to do 1x1, 1x2, in thirty seconds, and you had to get through all numbers, one through nine, or zero through nine, and if you couldn't pass it, you just did it over and over again. Eventually, when I couldn't pass like five or six, she started

> saying, "Well, you can't do this, OK you have a detention today." The other kids made up rhymes about me because I couldn't memorize my times table. I got detention every time I made a mistake.

The negative experiences with teachers often caused anger and resulted in insights regarding what could have been done to improve the school experiences of these participants. Diane recalls:

> I remember being so angry at the kids who would get the As and stuff, because I actually knew more than they did, but nobody would let me say anything. If they had given me oral tests, I could tell them anything that they wanted to know about, but they always gave me the written stuff. I would be on question 3 or 4, and the time would be gone, because it took me so long to figure out what the questions were.

Several participants mentioned specific problems with high school English teachers who often gave writing or reading assignments that they could not complete in the allotted time.

> K. I've always had Bs and Cs. I had Ds, but not too many. Not a lot. I know in my senior year I got a D. I just had a really hard time with my English teacher in my senior year. I know I got Ds in her class, but not too many.
>
> S. When you say a hard time, what do you mean by that?
>
> K. She didn't understand learning disabled, and she was a difficult teacher with everyone, it wasn't just me, but with me, she thought I used my learning disability as a crutch, and she gave me a very hard time. I tried to get help with her but she wouldn't. She'd make me feel like an idiot. I had a very bad time with her.

Some participants also recalled embarrassing and frustrating experiences with educators other than teachers, such as counselors and principals. Fred said:

> There are stories about what the principal did to embarrass me. One time, she walked into the bathroom while I was in the bathroom and told me that I got a D on my report card and said, "Young man, you had better shape up." To say that in front of 4 other kids, yelling at me in the bathroom was nothing short of humiliating. It certainly didn't add to my reputation among my peers.

Some of the participants in the study are still angry about the negative experiences that occurred when they were in school. Joe said:

> I am very resentful of my elementary school treatment. I am rather resentful of public education as a whole. I don't know how else I couldn't [sic] feel, but I am not mad at very many individuals.

Some who have sought counseling in later years indicated that they often discuss specific negative situations that occurred in their school years with their psychologist or psychiatrist. Peggy states:

> I am still very angry. I've discussed this with my psychologist. I carried a lot of anger towards my second grade teacher, towards my fourth grade teacher. I was upset, I mean, I used to sit in front of the classroom and cry, because I couldn't get my work done, and she would send me from my desk to another desk in front of the class and I would sit there and my friends would come over and say, "What is wrong?" And she would say, "Leave her alone, she just feels like crying." I never

> got my work done. I never would get to do the things that people got to do. You know, when you got your work done then you could go play. I think the only day I ever got to play was the last day of school and everyone did. I remember looking over and being told you know, "Get your attention back on your work, you are supposed to be copying this down off the board!"

Some of the participants in this study simply accept what happened to them during their school years, but have been left with an impression that they are not as bright as their peers because of their learning disability.

M.	I am not as smart as everybody else. I think that when that came out more is when I went on in school, I was held back in first grade.
S.	You stayed back because of the learning disability?
M.	Yeah.
S.	And they told you it was because of the learning disability, or they said that you didn't have the skills to go on?
M.	No, they told me, because it was the learning disability.

Problems With Peers

Most of the respondents could cite incidents of problems with their peers that almost always began in the elementary grades and continued throughout school.

P.	By fourth grade the kids had picked up on the fact that I couldn't do my work.
S.	Did they make fun of you?
P.	Yeah. They made up songs about me. At the end of doing all of the times tables, you had to take a thing called "The Review." It was flash cards, and it mixed up all the different times tables, and you had to do a certain number of them, and pass the review, and there would be a big thing about, "so and so has already gotten to the review and so and so did it today." I never got the review, and there was this song about that "Peggy will never take the review" made up about halfway throughout the school year.

Some passively accepted their treatment and some fought back. Diane explains:

D.	I was quiet in school. I learned real early that the quieter you were, the less trouble you would get into. The only thing that I did was that I really was pretty abusive to the other kids if they teased me in class.
S.	You wouldn't take it [the teasing]?
D.	Well, I knew that I couldn't do anything in class, so I would wait until recess or something, and I would just beat them up.
S.	And it stopped.
D	Yeah.

It also seemed evident that some of the participants in the study were worried about and influenced by the opinions of their peers. They often described incidents in which they knew the answer but could not answer correctly because "the right words could not get out," causing their peers to make fun of them. Fred said:

> That's another problem. I could know the word, know it well and say it wrong. I felt dumb in elementary school. I believed and trusted what the other kids told me. The kids would say, "you're so dumb." I believed them.

A particularly sad part of one interview resulted in Fred indicating that he had *never* had any friends in elementary school.

> F. I believe I didn't have friends because I was different, because I would say things that were not right. I might. . . .I didn't think the way most kids thought. I didn't care about a lot of the things that they did, and I would spend a lot of time alone because I was comfortable alone, and when you would go out at recess walking alone being comfortable by yourself people start to think you are strange. So that made the cycle even worse. I had to be comfortable alone because I wasn't accepted into a group, because they saw me comfortable alone, etc.
>
> S. Did you have friends in junior high school?
>
> F. Interesting point. In junior high I made a friend, I use the term loosely now, named Jerry, and Jerry was actually a help to me because he taught me how to act the way the traditional teenage boy should. He was into hell raising and I was actually more like his conscience. He would. . .without me he would have gone a little bit crazy, but without him, I would never have come out of my shell. So between the two of us we kind of balanced each other's egos, but we had a falling out in the 8th grade and we didn't have a falling back in until the 9th grade, so when I first started high school, I had no friends again.

In another interview, Kate cried when recalling several incidents related to peer pressure.

> I remember an instance when I wanted to die. My girlfriend sat next to me in a history class. I don't think she even knew what she did. My history teacher was tough on us. He was an older man, always giving these pop quizzes. He asked me to read out loud, so I had to read. I only read like one paragraph and I stopped, and he picked someone else in class and my girlfriend turned to me and said "What's wrong with you, you can't even read?" And I thought, "You're my friend. Why did you have to embarrass me like this?" It was so hard.

It should be noted that the two participants in this study who were identified early in their elementary school years had no memories of negative interaction with their peers. They were accepted by most of their teachers and peers and, consequently, seemed to accept their own strengths and weaknesses.

Tracked Classes and Lack of Effort in School

Ten of the twelve bright students in this study had negative opinions about the tracking system formerly used in most of their schools and, in particular, their lack of opportunity despite high IQ scores and/or indications of high potential to be placed in higher level reading and math groups in the elementary school. In some instances, their placement in low skills classes resulted in negative opinions about themselves. In Mike's words:

> I couldn't do certain things and the teachers were always hounding me and also I kind of got it into my head that I wasn't that smart. Sort of, I don't know, I think I was kept down. Because I think I could have done a lot more, but they would always put me in low groups and things. I was never in the highest reading groups or the spelling groups.

Because of the high potential of many of the students in the class, being placed in low skills classes produced considerable anxiety, frustration, and boredom.

S. How were these low skill classes?
J. Dreadfully dull.
S. What did you do?
J. I drew things.

Some of the subjects asked their mothers to intercede for them in order to get them placed in more challenging classes. Fred explains his reaction to low tracked classes:

> No, I wasn't being challenged. I mentioned to my mother that I felt that I could handle more than I was doing. The reading groups that I was in, I felt that they were still too simple, and so she requested that I have testing, and I found out that [reading group] was really way too slow with what I could handle, and so that worked out pretty well after that.

Martin's parents were so frustrated with the school's inability to challenge their son that they found a summer camp with a stimulating and challenging academic program for students with learning disabilities. Martin's frustration about never being able to move to a higher track class during the regular school year was evident in his comments. His high school used a three track system in which track one was the highest track and track three, the lowest. Each year Martin was led to believe that he would be able to move from the lowest track with special services into a higher track in which he was "mainstreamed."

M. I was ready to go out. Ready to. . .when they were telling me you are going to be mainstreamed, total mainstream, I was ready for it. I wanted to go bad.
S. And so you weren't able?
M. It was a slow process, because they put an expectation in my mind saying that I was ready, and then the next year would come, and I would schedule for classes but it never happened, and I was always in that low tracked class.

Commenting on these classes, Martin continued:

> In 7th grade, I was in English level three, and in English level three they only teach you at a certain pace. They only require so much. They only give you so much of a workload, but in a level one class, they give you so much more of a workload, and a higher level of understanding required, and since I was always in level three classes, I was never stimulated.

As a junior in high school, he finally was able to take an advanced class:

> I think I could have been in a higher level, but because I had [a] learning disability, I was put in these low levels. I wasn't pushed to excel, or do better, or even try to achieve at higher levels. I was never like that until 11th grade. So in 11th grade I was put in English one, the top level English class, and I passed, and then [in my] senior year I was also in there and I passed, but all the way up through there I was in level three.

Mike had a similar experience. His parents, frustrated with the public school system, transferred him into a private religious school. In Mike's opinion, this school had more challenging classes and better teachers. In this school, based on IQ test results, he was placed in a high group, and his grades went up. Mike explains:

> My grades were very high. This was the first time I was ever put in a high group and my grades went up. I was proud of that.

Several other participants mentioned the lack of effort required in classes that were not challenging for them. Joe indicated that he never worked, never did homework and drew during all of his classes.

S.	What kind of grades did you get?
J.	Low Bs.
S.	With no effort?
J.	None whatsoever.

Forrest had similar experiences as he was never required to work.

> F. I didn't try very hard to be honest. In high school I never had to study for anything, and all I do is read the stuff the night before the exam. The only thing I did ahead of time was term papers and stuff like that.

When any of the subjects in the study were able to move into higher tracked classes, changes occurred. Kate explains:

> I was in the lower classes, I was getting As and Bs, I mean it was just way too easy. I had this teacher for general bio and she said, "I think you could get into biology." So I could still have her. I switched into it. It was difficult, but it was a challenge for me then. Like I was getting As all the way through. Everyone copied off of me in general classes, but in college biology, it was more of a challenge which I liked. I struggled to get a B, maybe even B-, but it was *challenging*.

Arthur relished the challenge provided by advanced classes and indicated that he could have gotten straight As in a general track. His determination to do well in school was evident as he explained his desire to work:

> But, straight As weren't the big thing. If I had gotten straight As without trying, it wouldn't have meant anything. Like I said, I might have a kind of atypical attitude towards school. I care about learning as well as grades.

Several of the respondents also commented on their ability to learn how to work when they had never had to work before.

S:	Were you ever frustrated because of the workload when you finally got into an advanced class?
M:	I did, but I was glad I was finally there.
S:	How did you learn how to work? I mean, you said you never really had to work before.
M:	I don't know, maybe it was just hiding in there waiting to escape.

Only one person in the study had a difficult time when he was put into more challenging classes. Fred commented:

> When I went to junior high, they threw me into the highest level group. Highest level science, highest level math, highest level English. I nearly failed science that semester, and there were extensive problems with the math group. I was in the highest math group, but I was falling way behind.

Others indicated that they would probably not have been able to survive in a higher group. Diane, who was always in the lowest groups, explained:

> The first time I read a book from cover to cover was when I was 36. Third grade was probably I think the most traumatic about reading. All sorts of things happened in the third grade. In one of them, the biggie was that they had this thing where if you read certain number of books you get these rewards, and I remember I picked out the fables, and they were just one story at a time, and I was really excited about being able to read those, and I know that they were only like 3 or 4 pages, but I mean it took me a long time to figure out exactly what those words were. I was so dedicated to looking the words up, finding out what they meant, and memorizing them so I could tell other people and stuff like that. And they said that I had to read 5 of those in order to count it as one book. I remember making a decision saying, "I am not doing this."

All of the respondents who voiced their concerns about their placement in low tracked classes attributed this placement to their learning disability. Evan explains:

> I think the teachers just identified me as "learning disabled." Before I was labeled as having a learning disability, I got the impression that I was labeled by my teachers as one of the people in high school who just doesn't do well, doesn't work hard and isn't going to make it. This is in retrospect, of course. At the time, I thought that they (my teachers) thought I was a jerk because I kept going back for extra help.

Martin summarizes most succinctly his disappointment and the feelings described by several other respondents:

> It seemed like I never, as I look back, because of my learning disability, I never got opportunities for learning in my high school.

Difficulty in Reading and Writing

The specific nature of the subjects' learning disability, in every case, was related in some way to verbal ability. All of the subjects mentioned problems with handwriting and spelling.

> M: I started using the word processor which helped with my penmanship, because I was terrible in spelling and penmanship. Those factors were diverting my mind from concentrating on what I wanted to say rather than worrying about the penmanship and my spelling, so that was a big factor. Reading loads were higher, and I found that I had help with. . . . I had tapes [books on tape].
>
> D: I have a language disability. Whether it is written. Whether it is input or output. I just have a real hard time with any kind of words.
>
> P: No, I had to. . . . I don't know what I had to do. I had to . . . just like sometimes I can write and sometimes I can't. It was just a matter of learning how to do it. I am very bad at spelling technical writing and my handwriting is atrocious. I think it will always be.
>
> J: Hum, I don't think he [one of his teachers] particularly wanted to deal with me. He didn't want to deal with my handwriting. My handwriting was very poor.

The problems with reading were also discussed at some length by the respondents. Kate said:

> My learning disability is language oriented. I have a hard time spelling. I can't spell. I even have a hard time reading. I have a very hard time sounding out words. Written expressions, I am very bad. I have a very hard time getting my thoughts down to paper. Basically, that's it but that's very difficult since languages vary. How I compensate, like say with reading is, since I am visual I'd learn the word, and I learn how to say it and I just remember it, but that's it. I think that's how I learned how to read, cause I had a very hard time sounding words.

Diane was able to recall exactly when she realized what reading was and that she couldn't do it.

> D: In elementary school, I was a nice kid and I tried hard. I was always in the lowest reading group.
>
> S: You always were in the lowest reading group.
>
> D: Actually, they didn't know that I couldn't read until I got into the second grade, and what I used to do is take notebooks home and my mother would read them to me. And then in the middle of the second grade after Christmas vacation, I was in the top reading group, and she said "OK, Diane, It's your turn to stand up," and I thought "God! How am I supposed to read this, because no one told me the story." I guess I never made the connection about the little things under the pictures, because I always just memorized the pictures, and you could turn the page, and I would just tell you the story.
>
> S: And how did you feel?
>
> D: At that point, I guess that was the first time that I really realized that something was different, and that the other kids were doing other things that I couldn't do.
>
> D: I have a problem with lots of reading. That's always gonna be a problem. I don't have trouble reading, I mean I can read through stuff. It's just running through pages. I mean I can read. I can sit there and read two pages or three pages and realize that I had no concept of what I put my eyes over in the last three or four pages so I have to start over. I can do the same pages a long time before I understand what's happening. I can read through math texts, complicated math texts, just as quick as I could read a cheap novel or something. It's just the process of going through the words.

Some of the participants also mentioned their inability to process and apply certain types of information and concepts. Peggy explains:

> I feel like my brain shorted out. I would understand the concept and if someone would walk me through the process and I could understand every step of the way, and then I would get home, and I would look at it, and I couldn't apply it. It was very frustrating, and it is very frustrating, because I think at that level, especially [when] teachers say, "do it my way!" And I couldn't, and I would say, "Well, I can't do it her way, so I am not gonna do it at all."

Variability of Special Education (Learning Disability) Programs

Three of the participants identified their learning disability specialist as their greatest positive influence, indicating the many benefits of the program run by that individual. *All* participants, however, who were involved in an elementary or secondary school program for students with learning disabilities indicated that a high degree of variation existed in the quality of their special education learning disability program. The reasons for the fluctuations in quality were numerous, including different teachers each year, no clear program goals, and a lack of coherent program. Almost all of the respondents described scattered activities in an unclear, disorganized learning disability program. It should be noted that some of these students participated in new programs. In some cases, the student was put in a program with many students who they perceived to have more serious problems than did those who participated in the study. Many of the participants had a difficult time describing what they did in their elementary or high school learning disability program. Kate gives a description of her program.

> Ah hum, I was I guess mainstreamed. I was put in a regular classroom with "normal students" and they would take me out for an hour every day or something, and I would go to a learning specialist or resource teacher, and then go over and do games and stuff like that.

Jake described his public school program for students with learning disabilities in this way:

> No, they hadn't gotten that far, now that I think about it, they were kind of pretty backwards. We just worked on, like vocabulary and spelling, I figured I guess they would teach you to spell better, then your disability would go away maybe.

He later attended a private school and was more positive about the program for students with learning disabilities in that school.

> I had a learning specialist one on one, and we would meet in a room in the back of the library once a week. We might have gotten to a few learning strategies, but we mostly worked on building sentences and spelling, one of the big things. I remember writing a lot and then. . .maybe the spring of that year, we got help from outside the school too, "OK, we will scrap everything you have learned about spelling and writing, and we will start over." So, like I would have problems spelling like the word "saw" or "it" or "if," just pretty much any word. I was a really bad speller I guess, so we worked on my spelling.

Colin indicated that by the time he reached high school, he and the other students would help each other in the LD (Learning Disabled) resource room because they became frustrated at the lack of teacher help.

> I tutored other people that were in my classes and they helped me. It was sort of a mutual help type thing. I was getting mad because the teacher didn't help, so I helped one girl there in my math class through math and she helped me do English.

Several of the students were also frustrated because the instructional level in the learning program or resource room seemed to be geared to lower ability students and so much was repeated year after year. They indicated that a belief seemed to be present on the parts of both their classroom teachers and their learning disability specialists that if a student had a learning disability, they needed remediation. When asked to comment on her time in the learning disability resource room, Peggy indicated:

> I kind of wondered why I was there, because everything that they had me do was so simple, and it just seemed, I kind of felt like I was doing it for them, because I would go into this room and the teacher would have me read this story that I had read ten times already in second grade, and fill in questions about it, and it seemed so obvious. It was kind of strange being taken out of my classroom, and having

> people wonder where I was going, and why I didn't have to be there on two days of the week.

Martin concurred and discussed the repetition he found in the program as well as the number of other students who were slower than he was at learning various skills.

> Those kids were learning disabled—you could see it. [In explaining why he was different] You could see it in their reading. You could see it in their understanding. You could see it in their spelling and all this, you know and just their, [sic] and myself. I just sat back. I could almost teach them you know, like I could teach them how to write, or teach them what to do, or these kind of things.

Sometimes the learning disability program stressed remedial reading in a small group or individual learning situation. Diane explained:

> They put me in a special reading class. . . .They gave me remediation. . . .I was in this like reading. . .special reading class, and the only thing I remember about that was that this guy had really bad breath. And I didn't do anything. He made me read all these things that I couldn't read. He gave me all this stuff that didn't help.

Some of the participants in this study were more positive about their secondary learning disability programs, but this also varied. To some students, being identified and placed in a special program was traumatic. After being privately tested, Mike was told by a doctor at a Connecticut children's hospital that he had a learning disability.

> He talked to me for a while and then he told me that I had a learning disability and that they were going to put me into some special classes in school. I thought of it then as being almost retarded. That's the way I looked at it. Well, not retarded, but I didn't want to be labeled as someone like that. Because I had friends in high school who were in that, they called it "the closet." It's a room about this big and the kids with learning disabilities would come and spend a lot of their time there and my friends who were in the room were really not bright kids at all.

Colin did not believe his secondary learning disability program accomplished a great deal more than his elementary program. He commented first about middle school:

> During that time, in seventh or eighth grade, I worked with a woman out of school [in a different school]. She used a lot of practice especially for spelling and stuff. Went over a lot of rules and stuff that they didn't teach us in elementary school. Like 'i' before 'e', they didn't teach us that stuff. We mostly just went over a lot of different ways of approaching things. A lot of them I have either already done or besides it was more work than it would help.

After Joe was removed from his self-contained special education class, he was no longer recommended for learning disabilities services and was told "he was cured," as if he had a disease.

The variability of these learning disability programs was experienced by all of the participants who were placed in special education programs. Sometimes the program provided only monitoring or mediation as Martin explained:

> And my learning disability specialist would check my grades, and check my progress and homework, and all this kind of stuff, so she was like my liaison, my mediator between other teachers.

Fred described his high school learning disability program as follows:

> The special education teacher helped me register for high school and said, "We will meet three times a week, five times a week to start with. We'll see how you do," and she started me going through the cycle of special education. Going down one period a day. Checking notebooks. Everything like in junior high. A little more intense because the workload was a little heavier.

Martin describes the positive role of his personal interaction with his high school learning disability specialist even though the strategies used in the program were not as helpful.

> M: I would come back for a seminar once a week. I mean, once a day, one hour or one class, or whatever, how ever long it was, yeah, and I would just check up, do homework there.
> S: Was that helpful to you?
> M: I wouldn't say a lot, but my LD teacher, she was great, she was a great organizer, or talker. You can settle problems with her, or whatever, she was a good intermediate person with my other teachers, but she didn't know any of the subjects, so if I had an English problem, or if I had a composition problem writing, she couldn't really help me in that aspect. She couldn't help me in math. She couldn't help me in Spanish, so in the room I never had any help, but there was help available, and she always got it for me.

Martin also had special learning disabilities content classes in which only students with learning disabilities were placed. He grew tired of taking these classes:

> Yeah, for English I would report to another room with other LD kids and a LD teacher. Total LD atmosphere, and then that class, I would take there, and I would be great, and everything would be for that class. My math classes were, I think, in mainstream.

He waited and waited to be in more mainstream classes.

> They always told me that I would be mainstreamed. We are shooting towards getting you out of LD, and into mainstreaming. They always told me that, and then the next year, "We are going to get you out," and that year came, "Next year, we are going to mainstream you." It was always next year, but it never actually happened until 11th grade, and then they said, "OK, well, we will put you in level 1" [the highest level].

A great deal of the variability in the learning disability program seemed dependent on the personalities, level of training, and "permanence" of the learning disability specialist. Kate explained:

> I was in a reading course in middle school. I remember that. There were a lot of people in reading. I don't remember middle school that well. My resource teacher, nice woman, but really didn't do anything for me. I just went there and that was about it. She was getting out of a divorce. I think she was going through her own type of problem situation.

Kate's high school LD specialist was very different and had a positive impact on her.

> I know Ms. D. helped me a lot. Now I call her my second mom. She was a wonderful woman, and I think also her persistence on talking to me about it, [my learning disability], I think that also helped, too. I think both of them combined, it was myself that really came to grips with it. In that sense, I mean, I came a long way.

Mike had a similar high school specialist:

> Yeah, because I was really closer to one of the learning disability specialists and she used to really help me out. It was a lot different in high school, they would help you—up here it is more strategies. There they actually help you with your work and get you started. I mean they wouldn't do the work for you, but they would be there to make sure it's getting done. You're doing it. . .really. . .here, it's kind of tough because the work here is a lot harder and they can't really help you because they don't always know what you're learning.

Several of the participants indicated that it was their learning disability specialist who told them about the university program for students with learning disabilities students that they later attended. One described the long interaction he had with his specialist:

> S: So you knew her over several years period of time?
> C: Yes and she was very helpful. Very supportive, if you need help with anything.
> S: So you kind of had this support person throughout high school? Did she encourage you to go to college?
> C: Oh, very much.
> S: Did she talk to you about a university LD program?
> C: As a matter of fact, that's how I knew about it.

After the participants became involved in a university LD program, they often reflected on how helpful it would have been if they had learned certain coping skills or strategies earlier. Martin explains:

> I will complain to this day about high school, and how they don't teach study skills, they teach you SQ3R but they don't stimulate [you] to use it, they don't. This is the first time in my freshman year [at the University] here that I had to use SQ3R as some kind of method of study. They never demanded it in my high school. In homework I had maybe a little bit more than an hour, unless I had an exam.
>
> S: Even when you went into the advanced classes?
> M: Yeah, I didn't realize then, so I do realize as I look back on it, but then I knew it, just that they didn't demand you to use study skills.

The Intersection of High Ability and Learning Disability

Most of the participants in this study had difficulty reconciling their high ability with their learning disability. Many were perplexed about the ways in which their advanced abilities and their learning disability interacted. Some still believed they were "dumb" because of all of the negative comments made to them throughout their years in school. For example, Evan explained that many of his teachers did not think that he was smart. But when asked if he knew he was smart, Evan replied: "Yeah, I always thought I was."

Some of the subjects indicated that because they had problems with specific skills, such as memorization, or specific subjects such as foreign languages, mixed messages resulted.

S: When did you start having problems?
C: Hum, I wouldn't even thought I was disabled but a friend who [sic] we knew was talking to me for awhile. I had some problems, my handwriting was always horrible, and I could never spell. Hum, she said, "Maybe we have problems. We'll do testing," and she came up with the results in my records. I don't remember, she termed those as someone that was learning disabled. I had no problems. I had real problems with foreign languages.
S: Memorization? Or?
C: Memorization, I couldn't do it. In fact in elementary school I could never memorize multiplication tables. As much as they wanted me to. I could never remember that.
S: Isn't that interesting.
C: Now that I am thinking back on it, but I couldn't memorize things, so foreign languages were absolutely horrible, and my teacher thought I was stupid, but that didn't bother me, because everyone else thought that I was really smart. I was excellent already in math and I just learned to dislike foreign language very much.

Some of the participants were able to discuss their abilities. Arthur indicated:

> I can think logically quicker [than my peers]. I can reason things out deeper. I can cut through more complex thoughts and ideas like philosophy. If I wanted to be a philosophy major, I'd be able to do it, it would take me a while. But, I could keep up with the best of them.

However, Arthur was never told by anyone in the schools that he was smart. In fact, he and several other participants indicated that being asked to be involved in this study was a validation of their high ability.

S: Is this the first time anyone had ever told you were smart?
A: The first time anyone had ever proved it, but I always knew.
S: You knew.
A: I knew that I wasn't stupid. I went through high school in the above average classes, struggling to keep up with my peers in those classes, but, I went through high school that way. In every subject, 21 was average, 41 was extremely high, and I was 30 level and that is how I got my Bs.

Arthur did not find out that he had a learning disability until he entered college and encountered difficulty with his classes. He had been repeatedly tested for learning disabilities throughout school and his parents were always told he was "too smart" to have a learning disability. Arthur explains how he asked for help in his sophomore year.

> Yeah, I always knew that I was intelligent, but I was very confused. I knew inside that I had the brains to do it. I had no proof of it and that's what caused the problem. I just couldn't produce the ways the teachers wished that I could. In my English class I asked the teacher for help. I don't even know what I got for a grade, but, I knew I needed something and he said he couldn't help me. He said there were rules and he was a very strict person. But he said that I could go to the Dean and ask if there is [sic] a program to help me. So, I went to the Dean and he referred me to UPLD.

When he was identified as having a learning disability by UPLD, Arthur explained how he felt:

> Good and bad. It was a big relief to know I wasn't stupid and it wasn't my fault. That was the big key. The downside was that I had a problem and I wasn't normal, and it also was hard to swallow that, too.

Two of the participants always believed they were bright even though the school personnel did not always recognize their abilities. Jake indicated that he always knew that he had high abilities and that he was bright, and Colin indicated that when he was identified as gifted, he figured they [the school personnel] were right.

The majority of the participants, however, were ambivalent about their ability level *because* of their learning disability. Peggy explains:

> It [my learning disability] did definitely teach me that, and it taught me a lot of lessons in looking beyond the surface in people. I was very frustrated that all my friends, who I know I was as smart as, were in honors classes and I wasn't. I had lots of people that I was friends with that [sic] weren't as smart as me, and you just know that [sic] would say you're not always on honor role. But you're smart. You are not in honors level classes, but you are smart.

Joe had one of the most difficult times understanding his potential. He was placed in a self-contained special education class comprised of different types of special needs students. During the time he was in this class, he was given an IQ test.

> J. I was I think in fifth or sixth grade when I was given an IQ test, and they found my IQ as eligible for the talented and gifted program. Then they gave me the talented and gifted test and they told me I didn't make it but not to feel bad, because learning disabled usually score about 15% lower than normal people so I probably would have made it if I had not been learning disabled.
> S. How did you reconcile this?
> J. I still haven't.

Fred talked a great deal about his perceptions of the intersection of his ability and his disability:

> F. Right. I did a lot of other things outside of school when I was younger. I was in the YMCA, and I got along better in the YMCA than I did in school, because they didn't know me from when I was really young. When I was young I was very shy, I didn't talk a lot and that. . . .The same kids that knew me as the shy little kid who wouldn't say anything, or say something very dumb.
> S. Did you feel smart in school?
> F. No.
> S. Not at all?
> F. I didn't feel smart, because I am not even sure I understand what it means to feel smart. If you are saying that I have [had] confidence in my abilities and know what I was talking about, no.

At another time during the interview, he provided more insight into his conflict about his abilities:

S. Was it clear that you were bright?
F. My teachers felt that I was bright, and I think the students in a way might have suspected I was bright, but not in a way that they were used to. I couldn't do math the way that they could, because they would put their plus signs in and remember the decimals and I would forget that, but I could find the answer.

Two of the participants related the conflict between their ability and the learning disability by indicating that they felt as though there were two people in their bodies, one able and one not. Diane's explanation was most eloquent:

> My thing was that I always felt like there were two people. One that I present to people, and the other one is inside me, but can't speak, and knows everything, and I get so absolutely frustrated that that's her. I write this journal, and I talk and I say, "OK, self," and the self that I talk to is inside, and is the one that always puts the pressure on, you know, because the inside person knows everything, and that person expects this person to be able to convey what they know, and it's like, I can't do that, I can't do that. So I sit there at meetings and things, and it's like, I just know all this stuff and I know all the answers. If I could just figure out how to say it, or how to get it out.

Diane still doesn't like asking for untimed examinations that are necessary for her to succeed in doctoral level classes.

D. I feel so inadequate, so dumb.
S. After all these years?
D. Oh, it just, that hurts more than anything else. I just. . . .It's like you know. I just start opening my mouth and I can just feel myself saying, "Well, this is a [damn] excuse," because I can't do it.

Peggy, who expressed similar feelings, indicated that she still questions her abilities:

P. I wondered why I couldn't do what everyone else could do, but I could still get really good grades on tests.
S. Yeah.
P. But I couldn't do my homework, and like I always was, you know 99 percentile on all those standardized tests that they give every other year, and I kind of thought that must just be normal, because my grades weren't good. So I thought I was kind of normal, probably not real normal, because I didn't get as good a grade as the rest of the people in my class.
S. OK, but specifically you knew that you. . .did you think of yourself as being smart ever?
P. People told me I was smart, but I didn't really believe them, but I didn't think I was stupid.

Peggy summarizes the views of most of the participants by indicating that she discusses her learning disability only with people who are close to her:

P. It is not like the first thing that comes up on the first date. It is not something that I am hiding.
S. OK, but neither does it seem a central focus of your. . .life.
P. No, I generally want people to know, so that they will know that learning disability doesn't mean that you are stupid.

Integration of Personal Traits, Environmental Modifications, and Learned Strategies Necessary to Succeed

The second core category which emerged in this study involved the ways that the participants integrated their experiences and environment, their personal strengths and various learned strategies to succeed.

Compensation Strategies, Learning Strategies, and Executive Functions

Multiple compensation strategies were employed by all of the participants in this study to succeed in an academic setting. All participants attributed their success in this environment to their ability to use these compensation and learning strategies. Compensation strategies include: use of computers, word processors, books on tape and self-advocacy. Learning strategies may include: methods of learning to study, note taking, and identifying key points. Executive functions are described as planning techniques such as time management, metacognition, and setting work priorities.

Some of the participants in this study learned numerous compensation strategies by themselves without the benefit of a learning disability program in their elementary, secondary, or college careers. Peggy explained:

> I learned to compensate for some of my learning problems but for others, I was still working it out. I knew I had learning disabilities. I knew that was why I couldn't do things the same way other people did them, but I didn't necessarily know how to work it out [the other problems].

Diane, who did not fully understand the nature of her learning difficulties until she entered college, explained one of the compensation strategies she used to discover the best topics for her research papers. She would make appointments with her professors.

> Professors like to talk and if I had to do a paper and couldn't find a topic, I would ask my professor what are the major research areas in the field. Then I would go to the next professor and say, what are top areas [in the same field]. And I would go to each of the five professors in the field, ask the same questions, look at the lists they gave me and identify the areas that matched. And half of my research was done without having to spend the time it would take.

Diane also cultivated friendships with persons in her classes whom she would treat to lunch. During lunch, she would bring up the current work being done in class and turn the conversation toward the reading required for class, notes she had missed, or lectures that she hadn't understood. Mike and others used the same strategy. Mike, who had difficulty taking notes, explained what happened:

> I started to write things and stopped when I got lost and thought, what am I going to do? Luckily a kid in my dorm was in my class and I looked at his notes and I said, "Wow, this kid's got all the things I don't have." And it worked to my advantage. I just used his notes and I started asking people if I could photocopy [their notes]. Up to date, I've always had at least one friend in the class. Every one of the classes that I've taken. It helps to be in a fraternity, because you meet a lot of people and you have a lot of brothers who have taken classes already or been in class with you.

By photocopying someone else's notes and comparing them with their own notes, participants in this study could determine whether they missed anything important during lectures.

Several of the students indicated that another compensation strategy they used was taking a reduced load of courses. Students who used this strategy usually took four, or occasionally three classes a semester, as compared to five classes, which is normally considered a full load at their university.

Most of the students also used many of the compensation strategies available to them because of their identification as having a learning disability and their participation in UPLD, such as extended time for examination, or taking an examination in a different room. Many requested extra help from professors who knew that these students had learning problems. Kate explains:

> I work with my professors, yeah. I even go to one of my professors with my notebook, and she has time enough to sit with me and read through my notebook. She sees that I miss certain things, and she fills in my notebook. She fills in notes that I have missed. Another professor, I always go to him and just talk to him, and he goes through the stories with me, and I write everything, I am visual, so I write everything out and make little, not pictures, but sort of like trees and attach them onto my notes.

Most of the students use various types of equipment such as computers and word processors, tape recorders, spelling machines, and some use books on tape. Most of the participants in this study also used various learning and metacognitive strategies described in the SQ3R strategy (which is described in Chapter 2) including: preview reading, structured reading (in which students review what they will read, identifying big highlights), reading abstracts, and planning considerable amounts of time for reading. Martin, who uses multiple strategies to succeed at reading, explains how he completes his work.

> For reading I need time, just give me time, and I can get it. If I read slow, if I read it slowly then I can understand what is going to be discussed, where as if you assign a book on Thursday and make it due Tuesday, I won't get much out of the book.

He also explains that he uses margin notes as do many of the other participants.

> I check in the margin those things in the text that I think are permanent [sic] information. And then I go back and I write a question out for what was discussed, and then in my own words I answer it underneath, and that way I could quiz myself.

Students also indicated they used outlining and notecards as well as pneumonics. Evan explained this way:

> If I have a list of terms or subcategories to use, I usually use pneumonics. Using the first letter of each one and make up a little saying or something like that or see if it spells half a word, I'll use that. It depends on what I'm trying to learn. I think I've found what works best for me in certain instances. Certain things I need to study certain [sic] ways than others.

While many of the students mentioned multiple learning and compensation strategies, it is clear that each selected the strategies that worked best. For each participant, an individual system was developed that enabled him/her to succeed using a combination of compensation and learning strategies. For some participants, this system included various study strategies, organizing their time to enable them to find the large blocks they needed to complete their reading, and analyzing their own difficulties to be able to overcome them. Arthur explained that he "was just trying to do things the normal way, I guess, instead of trying to get around what I wasn't doing right. Now I read better and I focus more and I understand what I did wrong so I try to avoid it." Arthur continued to explain his system by elaborating on the planning that he learned to use in the UPLD.

> Well, I'm better at planning. If you want to go over the major things that enabled me to improve my grades at school, there are the untimed test time for the testing accommodations. There was planning and organizing. I now carry a calendar around and I go through all my syllabi and plan out when the exams are and what reading has to be done. I don't always get it all done. Right now I'm behind in a couple classes. But, I know what I need to do and I have it in little pieces. . . . Chunking, the term that they use. Keeping me from getting overwhelmed, if I have a list of eight chapters that I need to do by next Saturday, that's overwhelming for me. I have to break it up, I have to start with chapter one. If the chapters are really long, I do sections of chapters, stuff like that. Self-awareness, I guess is, that was a big thing, knowing how long I need to do something. When I started the program, I couldn't plan out how long I needed to read a chapter. How long I needed to work on something. Now I take note of the time it takes me, so I get a better idea of how to plan.

The individual system that each has developed includes conditions that must be met for work to be completed. Mike finds a quiet place in the library where no one else is working.

> I've got to be totally isolated for me to produce. You know, my production rate is much higher if I'm isolated with no one around me. Or no one around me that I know. You try not to sit near a pretty girl so you don't look at them. I just try to make my habits perfect.

Other male participants also mentioned that they can not sit near an attractive female in any of their classes or they may lose whatever concentration they have trained themselves to have. Female participants did not believe sitting near an attractive male was a problem.

Most of the participants indicated that they could not be employed during the academic year because of the amount of time necessary for them to complete their courses. One participant, who worked at a job related to his passion and avocation, bicycling, takes only two courses a semester. Most others work only in the summer.

Several of the participants also mentioned what may be labeled an "underground network," a system of checking with other students about professors from whom they should take classes. They try to find professors who are fair, who will make the necessary accommodations for students with learning disabilities, and whose lectures are keyed to the text that is assigned. These professors were able to be selected at a large university but may be less accessible at a smaller college. Joe indicated that selection of professors was a major "success" strategy for him. "I learned to cope by getting the right teachers."

Three major themes related to compensation and learning strategies. First, each participant developed a system that was unique to the nature of his/her disability, his/her personal styles and preferences, and the compensation strategies that worked best. Second, an extraordinary amount of time, effort, and energy was put into their studies. Forrest explains a representative situation related to preparation for a chemistry exam.

> For the last chemistry exam in particular. My notes run very close to the book. I went through the book. I took notes on nearly everything in the book that wasn't considered important. All the major theories of people. Everything I studied for was on the exam. I mean not everything cause it would have been a lot longer exam, but everything that I didn't know off the top of my head. I don't try to fool myself. I know that, so I don't have to write it down. On the six chapters, I took like 12 pages of notes, and then I went through that, and what I did is, I studied that, and then I rewrote everything that I didn't feel like I had the first time. I would just do that until I knew everything backwards and forwards, and then I went through the notes in the book, and anything I hadn't studied already in the book and the notes. I just wrote down what to study, but I spend days of doing that amount of studying. I took notes relatively [sic], it wasn't just taking the notes. I didn't count that as just studying. I would finish reading the chapters about a week before the exam, and spend a couple of days taking notes on the exam, for the exam from the book. I'd say I probably put in 30 hours or more studying for the exam. I mean that. . . .I'd put in the days before the exam, I'd put in 3 to 5 hours a day for at least 4 to 5 days in a row, at least 4 days in a row.

The third theme that was apparent was the degree of comfort that the participants had with using the various learned compensation strategies that they had learned and they were entitled to use because of their learning disability. A continuum exists about the adjustment that these students have towards their learning problems. Forrest and Diane believe they are "cheating" or not really working if they take advantage of options such as untimed tests and the use of a word processor for exams. Diane was constantly told that if she would only work and study harder, that she could overcome her problems. Accordingly, she still believes that asking for help is analogous to admitting she hasn't worked hard enough. Forrest initially felt the same way.

> If I got an A, I wanted to get it under the same circumstances as everybody else. Because I felt like maybe I was cheating in my work, whatever I got if I had an advantage that they didn't. After a while, though, I realized that I am at a slight disadvantage, anyway, so it [using extra time in exams] just balances out. Now that doesn't bother me at all anymore, and like I said though with the extra time in exams, sometimes I use it, I am always prepared to use it, like I will get there early, or I will have the option to stay late. Then I've used it twice this semester, but it has always been available to me to use. . . .

Other students used services provided in the UPLD and various learned compensation strategies easily and without guilt, while others analyzed and reflected about why they needed help and why it may be difficult to request assistance. Peggy explains:

> I think that the hardest thing is to. . .know when I need more help, and when I can do it on my own. I am an individual, and I don't like someone else doing things for me, or even doing things with me, and it was very hard to get to the point to say, "I need help learning to memorize things." I want to be able to do it on my own, and I was constantly being told that I was smart enough to do it on my own, and it was frustrating to realize that I have to do extra to get to [the] same point that other people can get to just by reading it.

Parental Support

Another finding reported by every participant was the pervasive presence of parental support. This support was always given by the mothers of the participants and, in about half of the cases the father was also supportive, either providing visible support by being on the sidelines or by providing financial support. Some fathers were totally non-supportive. The mothers of these students were their primary supporters and consistently demonstrated their support in specific ways. The majority of these mothers were well educated themselves. Seven had college degrees; three had degrees in nursing and only two had not graduated from college. These mothers monitored homework, told their children they were smart, selected computers, scheduled and attended teacher conferences, argued with school personnel about class placement and the need for learning disability services, sought information about learning disabilities, took their children for outside-of-school testing, sent them to special camps or private schools, read and checked their papers, and provided constant encouragement and love.

The following representative comments indicate the various types of support participants believed were provided by their parents:

> I was dealing with it [my learning disability] all my life and my mother supported me in this. I mean, my mother made me sit down one time when I was having trouble with my handwriting for one summer and literally practiced with those sheets to practice penmanship. My mother would also sit there and help me with my Latin all summer. I mean, she was there supporting me so I did not feel like an idiot. I knew I had a learning disability but I didn't feel that made me dumb. (Frank)
>
> I send all of my university papers using electronic mail to my mother to read and edit for me. When I need her, she's always there to help. (Colin)
>
> My mother was *always* right next to me. (Joe)
>
> I learned to just keep trying—when I couldn't do something, I never got hit or beaten or scolded because I didn't do things. There were a couple of times in my academic career where I just didn't do the work, like when I didn't hand in the papers and in fourth grade I was like three quarters of a year behind in spelling because there was a self-run program and I didn't self-run it. My mom just said, "Well, now we have to do it all in one quarter." And I did it. (Arthur)
>
> My mom always said that I could do anything—I would just have to figure out a way (*my* way) that I could do it. (Diane)

The support given to these students was never given in the same way. Some parents were strict about homework, and some gave total freedom. Some parents set high goals, others never discussed expectations. All parents, however, became very involved with school personnel when problems developed. The participants perceived their parents' (usually mother's) frustration. Peggy explains:

> Yeah, I think my mother was very frustrated. She was trying to get a lot of stuff done with the school personnel, and they just wouldn't. . . .It took a lot of effort on her part to get them to do anything.

In every case but one, this support existed all the way through college. Most parents helped their son or daughter select a college or university with a program for students with learning disabilities. Diane, who had severe problems in school and who attended school before many people knew and understood the ramifications of learning disabilities, remembers her parents' reaction to her news that she had decided to return to college.

> When I told my parents I had been accepted at K. State, there was dead silence on their end of the phone. After about a minute, my mother said, "Why would you *ever* do that to yourself?"

Diane's parents, however, have been extremely supportive of her efforts since she returned to college.

All of the participants acknowledge the support, protection, and advocacy of their mothers. Some also mentioned their father's support, but five participants commented on the lack of support from their fathers. Mike indicated that his father worked all the time:

> Working. He works all. . . .I don't think he is happy unless he's working. Because we go on vacation. We'll get home, before he will unpack his suitcase, he'll go to his office. He's really busy. He's a good man, he's just, he's really, really work oriented. He kind of lets my mom handle everything. She handles the bills, she handles everyone's college and school problems and whatever else. She just takes care of everything.

Jake had a similar experience:

> I wish I would have had more contact with my dad. He worked too much I think, as a kid. He was never home that often. He has a really hard time communicating personal stuff. He is also very giving, if he feels comfortable with a certain topic or subject he will be like a really nice person and help you out all he can, that way. . . like that is something he is interested in.

Kate's father never remembered that she had a learning problem. After each teacher conference, Kate's mother would explain over the dinner table the types of things the teachers had said:

> Year after year, it never failed. My dad would be like, "What are you talking about? Why are you talking about this? What is this?" And we would have to re-explain to him that I am learning disabled. And my mother would, I mean my senior year she would say, "You know, why don't you listen?" And then I would just talk about it, cause I'd like to talk about it, he said: "What do you mean?" And I said nothing, nothing. So he just didn't understand. He didn't know what it was.

Participation in a University Learning Disability Program (UPLD)

All of the participants in this study who participated in UPLD were extremely positive about this program. Consistently, they mentioned the study strategies they learned, the support system that was available, and the help they received. Those who were not involved in a UPLD had many more problems in completing college. They had to seek help from friends, considered dropping out, took longer to finish and had much more psychological stress. One did drop out of college, and later transferred to UConn because of the UPLD program. Jake summarized eloquently:

> S: How about going to a place that has a learning disabilities program like UConn? Has that been helpful?

J: Yeah! Definitely! If you are LD and you are looking at a college, definitely go to a college that has not just any LD program, but a structured LD program like they have at UConn. I think if you went to a school which had like a LD program where like the counselor changed rooms every semester and faces always changed, I wouldn't really. . . .I don't think a program like that would be as good as a program like the one at UConn.
S: So the continuity, the same person running. . .the same place.
J: Right, because I think it also gives the program a little more meaning to other faculty on campus, like it just seems now that the UPLD here is establishing itself on campus among the professors. It has been becoming a known thing. The more LD students who go through UPLD makes it better for the next generation to keep coming up.

Mike also summarized the benefits of the program

S: Does UPLD help you on campus?
M: In lots of ways. It helps me get things in order, but in some classes, teachers pay more attention to me. In an anthropology class, the TA [teaching assistant] asked at the end of one section if there was anyone in the class who has a learning disability or a handicap. She asked if anyone with a special need would come and see her. Almost 300 students were in the class. But this TA was fascinated with the whole thing. She helped me out on those papers that I wrote. So, there were things like that. There is nothing negative about the UPLD. Teachers really understand up here.

The majority of those in the study who participated in the UPLD indicated that they applied to and matriculated at UConn *because* of the program. When Evan was asked why he came to UConn, his response was representative of several others.

> Largely because of the LD program. I heard really good things about it. I spoke with the director and it seemed like one of the best programs around. The faculty at UConn was understanding about handicapped students. I've had very few problems with teachers about being learning disabled.

Some of the students indicated that they believed they would not have been accepted into UConn unless they applied under the auspices of UPLD. Mike indicated that although he applied to one other college, he "only wanted the UPLD program at UConn. Actually, I got into UConn through the program." Evan also indicated that he applied to UConn through the UPLD. A guidance counselor mentioned UConn and other colleges.

E: Yeah. I was given a listing of schools which had LD programs and UConn was one. My parents did ridiculous amounts of research of colleges and what had the best LD programs going. So, we primarily targeted schools that had good reputations for LD Programs.
S: So your guidance counselor was encouraging?
E: Yes, she was encouraging. She thought the best way I could get into a decent school was through LD. That was the way to get me in.

All of those who had participated in UPLD mentioned various strategies that they had learned through UPLD. Evan elaborates about organizational strategies:

E: Organization. I was really unorganized when I came up here. I'm not completely organized now, but. . . .That was a main factor, just getting myself organized and. . . .

S: How do you go about doing that?
E: Date book, stuff like that. Looking at your syllabus and figuring out how much time you have to allot to studies.

Each of the students discussed the various levels he/she had reached in the UPLD continuum of services. Arthur, who was identified as having a learning disability while at UConn, participated constantly for the first 1 1/2 years after he was identified. He explained:

> Right now I'm going once a month. [I] just switched over because we ran out of things to do. Last year I went often. I'd come in with a problem. They told me at the program that I moved very quickly. I started out with major problems and through goals and goal planning, working with the specialist, I got through it in about a year and a half. I went in twice a week for an hour. I'd always have problems with my homework and things that I couldn't figure out and I always had nonacademic problems. I learned how to use other resources for academic problems, like if I couldn't figure out a math problem, I learned where to get a math tutor.

Each student also discussed specific incidents in which his/her participation in UPLD helped. Colin explains:

> Last year I took philosophy and I went to the teacher and said, "I've real problems writing in class, and my handwriting is horrible and my spelling's horrible. You're really not gonna like my essays. I can't reorganize my thoughts, like on a word processor. May I take the finals somewhere else?" and he said, "Sure, here is the final. Come back in two hours."

S: Did he know you were in the UPLD program?
C: Oh yes, I told him at the beginning of the year. He said, "Take the final back to your dorm, type it out and bring it back."

Participants were also very positive about the continuity in having the same program director. They were uniformly complimentary about their director and her contribution to their success. Joe's comment is representative of one made by participants:

> It's really nice to have someone up there to bat for you. If I have a problem, it's good to know that I have her out there to handle the problem.

Self-Perceived Strength and Future Aspirations

The majority of the participants believed their capacity for hard work was their greatest asset. Each of these students learned how to work hard because of his/her learning disability, as was clear in these representative comments:

> I worked very hard. I would do hours of homework every night, but I am glad I learned how to do homework in high school, and so now I know how to do it here in college. (Peggy)

> I was always. . . .I even consider myself now, and complain sometimes about it, but I was always the worker. I always did the gardening, or the landscaping, or the vacuuming, or the dishes. (Martin)

> I am interested in school. I want to do well in school. It used to be in high school I wanted to be getting a B, I wanted a B-. I wanted an 80 or 81 just so I could say I got all Bs. I didn't want to be a C student. But now I want the As. I don't just want the A-. I want the highest grade possible. I mean which isn't to say that I sometimes I don't procrastinate every now and then, but when it is time to study, I'll do it. (Forrest)

> I'm sure I studied that much in high school. I was all ears in high school. Only because class wasn't very hard. You didn't really take that many notes in high school. I didn't at least. Sometimes I did, but I would just sit there and listen to everything they said and if you listen in high school, you can get good grades. If you go to class and listen. It's not an overload like when I'm in class here, you take like six pages of notes per hour and in high school, you don't do that, you know, it's a lot more open discussion sort of things. If I could go back to high school now, I'd go to Yale again, four years. I'd get As in everything no matter what class, I'm positive of that. (Mike)

The determination and motivation of each of these students was also quite clear in each of their interviews. Their commitment to hard work, to follow through on what they needed to accomplish and the self-initiative that they consistently demonstrated often made them tired. Half of the participants experienced this feeling. Arthur explained:

> It's just, you know, I just got through three big exams, stayed up to 4:00 in the morning, got up at six and now I got to do more work. So, I need a break. I want a time when weekends mean that you don't have to do any work. Come home, you really don't have to worry. Maybe once a week, you have to do reading for somebody, proposal or something.

Jake also reflected on how hard he needed to work and indicated that after a prolonged period of hard work, he sometimes became apathetic:

> I have the power to compensate for my disability. It is just that sometimes apathy kind of takes over. I just don't get on the ball the way I should, and the semester goes by so fast, if I wasn't on the ball right at the beginning, by the end of the semester I am hurting.

The work ethic described by the participants also carried over into their employment; each had one or a number of summer jobs to defray college costs. The motivation that enabled them to work in so many areas usually focused on obtaining a college degree. In fact, some of the participants in this study became *more* committed to graduate because of their learning disability. Forrest commented on this:

> And one thing that always fascinated me, I'd be the first in my family to graduate from college. They've all gone into technical careers. They went to technical schools in high school. Some of them are carpenters, and such and such. She [my mother] doesn't really push me because she doesn't need to. I mean, I know what I want. One of the things I don't want to be when I graduate from college is somebody who graduated with a 2.5 and be the same as 5,000 or 5 million other kids who come out and not have anything separating me from them. Otherwise, I'll just be stuck in the regular position. I mean no offense to anybody who would have gotten a 2.5, because some are pretty smart kids. It's just that I want to try and do a little better. I want there to be some difference between me and them. Also I thought if I got a college degree, I could find more creative work. I didn't want to just go into business. That's why I want a degree. With that, I won't have

> to be in business. Then I can do something that will make a difference. I am not as concerned about money as I once was.

Several of the participants in this study had to change their majors in order to succeed in a university setting. For those who must spend hours reading what other students who do not have learning disabilities can read in minutes, the pursuit of a liberal arts degree remains difficult, if not impossible. Those who decided to major in liberal arts use many of the compensation and learning strategies mentioned earlier. However, most of these students have learned to select majors in areas that enable them to succeed without the hours of reading required in liberal arts. Mathematics, engineering, sciences, physical therapy, music are all areas selected for majors by this group. However, exceptions do exist. Mike changed his major three times and is now a liberal arts major:

> S: What was your original major when you came to UConn?
> M: Landscape Design. I only stayed a semester in that. Then I went to Art, Graphic Design. I'm not bad at art. I'm not exceptional, that's what kind of turned me off. I took some art classes and I didn't think I compared to other kids I was doing art with. So I got out of that and went into Liberal Arts.

Evan's learning disability created problems for him in mathematics and he is now a prelaw major:

> I came into school as prebusiness and I found that my learning disability hindered me, especially in the math. And accounting, I mean, I dropped both of those classes and so far I've taken a law course. It was kind of hard, but I think I'm better prepared to handle something like that than the math aspect of business.

Regarding future aspirations and careers, most of the participants had definite career plans. Because they learned to work so hard, most were convinced that they can succeed in life. However, it must be noted that about half of these students have been deeply affected by what happened to them as children, and scars remain. Complex emotions continue to affect many of them. Five have sought counseling to reconcile some of the problems and mixed messages that often were caused by their educational background. Kate, who has problems dealing with the interaction of her ability and her disability, is proud that she will graduate from college. She explained that her father, who had never really understood her learning disability, attended a special program with her during her senior year of high school and finally seemed to understand some of the problems she had been dealing with during school.

> When I graduated from high school, the look in his eyes. He said, "I am so proud of you for graduating, not just because you graduated, but because you are learning disabled and you graduated." Now my goal is, I'll be the first. My brother got lazy, my sister just didn't go to college. It wasn't her thing. So I will be the first [in my family] probably to graduate. I don't want to just do it for my parents and that would be wonderful, but yet, to get ahead you have to work, and I can do it. I can do it. I knew one girl who was learning disabled and she didn't go to college, because she couldn't. She couldn't do it. I know that I do have a potential, and I can do it, so I had to.

In some ways, it seems as if Kate's learning problems resulted in a determination to succeed. However, this does not mean that she doesn't have scars resulting from her experiences in school and obstacles to overcome if she is to succeed in college. She still doesn't believe she's found an area in which she excels:

> I don't think of anything extraordinary or anything that I have on my own that makes me feel good. I mean other people are doing these things because it makes them feel good. I don't feel I have anything like that. It kind of makes me envious that they have that. One woman that I worked with, when she found out I was learning disabled she would talk about her daughter who was learning disabled. Her daughter was in the theater and she would go to school, but then she was in plays, in the theater and she could sing and dance. I said that's great, and yet there wasn't any outlook or output for me. I still don't think I found it. I haven't found it, so I don't even know how to go about doing that. I mean I have a high IQ and I do well in serial learning, but still that's not gonna get me anywhere. . . .What's that gonna get me? Everyone seems to have something but me. So that makes me upset, I guess.

Peggy also reflected on what her future holds in relation to her learning disability:

> I think about my learning disability a lot, and I have tried to find out what I can about it. I notice things about myself. I switch letters. For my entire life I think I am going to switch B and P in writing. No matter if I am printing, typing, writing it out, capital, lower case, I will, especially if I am in a hurry, will switch them around, and I won't notice until I am completely done then I go back and read it over, and I have put the one letter in for the other.

She had sought and received counseling to deal with her learning disability and, as a result of her participation in this study, she sought assistance from the UPLD at UConn which she had not previously contacted because of her prior negative experiences with public school learning disability programs. (She was told she was "cured" of her problem and dismissed from services in secondary school.)

Another issue that many of the participants consistently addressed was that they blamed themselves for not trying as hard as they believe they should. Perhaps this is a legacy from what they were consistently told by their teachers and, in some cases, their parents. Kate reflected on this:

> I have a lot of potential, but I find that I don't try as hard as I could. This is weird. It's the idea of. . . .I learned this through counseling, I can't believe I do this but, I don't really try as hard, so if I don't succeed it's because I didn't try, but if I really try and fail, I'd be hurt. I gave it my all, so I don't want to make that big jump and really try and get hurt, though I am doing average and I probably can get an A. I am still working on trying to overcome that, getting around that.

She always believed that she would get over her learning disability. When she was initially told about the problem, she experienced hard times in school:

> I didn't understand it, but it was hard. I was always getting pulled out of class or whatever, and I hated to read in class. I tried very hard to forget I had it. Certain days it would be good, it's like, "Oh, it's going away." Even in middle school I thought: "I'm going to try harder and I am just gonna do my school work, and I am just going to forget it. I'm not going to have it anymore." I didn't quite understand it, so I think even just going into high school. . . .I was like "I got to get over this," and that's when I realized that it's not going away.

At one point near the end of an interview, Kate stated: "I want to be normal. I want to be like everyone else." She tried to overcome her own negative feelings about her learning disability:

> I hate that I am learning disabled. I've met people with learning disabilities who use it as a motivator. I am trying to find a way of doing that. I wish that I could just do things and [that] I didn't need to overcome the problem. I don't have a problem if people know about it [my learning disability]. I mean I don't tell everyone. I don't tell everyone I have met, but friends that know, I don't really have a problem with it. I mean I've talked to some people, like even when you called that night. The girls were in my room, and asked what the study was about. And I'd just explain it to them. Really! And they would just start asking questions about it. I don't have a problem. I mean in some ways I'd like to even do some work with it, but on my own, but it would be nice if I wasn't. But what can I do, I have this problem.

Diane, who had seen a psychiatrist to "come to terms" with what happened to her, experienced many insights about the system. In her last year of a doctoral program, she believed that she had "conquered" the system.

> I have conquered the system. The one that says that I am nobody, because when you're not an academic success in this society you're not a success, and I don't care whether you're the best carpenter, the best plumber, the best whatever. You are not a success, or that's what I feel about it, is that I can be the best carpenter in the whole world, but I am not a success unless I am an academic success. And that's what we tell kids. We tell kids from the first grade, if you don't get the As, you're not a success. Only the kids that do real real well are a success.

She still believed she should not *need* to use the compensation strategies that she learned and she constantly questioned her own ability: "Because if I was really smart, then I shouldn't have to do this" [use compensation strategies]. Despite her psychiatric help, she still had anger and bitterness about her school experiences. When asked what drove her to pursue the doctorate, she replied:

> It is the system. I think it is the system that has kept me down all this time, and I am gonna get the system, when I get through with this. I can say that there is nothing else that the system can throw at me that I can't deal with. It is the system that took 20 years of my life away. Twenty years that I found out I was a piece of shit who couldn't do anything. That I can't be who I am, you know.

The other half of the participants in this study seemed to accept their learning disabilities and seemed to be adjusted to a future in which they anticipated productive and happy lives. Admittedly, these participants did not have the worst educational experiences of the group, although some were retained a grade and had negative peer and teacher interaction. However, none of the group who now seems happy and adjusted to their learning disability had a traumatic experience to deal with such as a *horrible* year with one teacher or placement in a self-contained special education class consisting primarily of students who were classified with mental retardation. Within this group of students, however, some fears and doubts about the future do exist. Worries about coping with their learning disabilities in their future work place were discussed by several participants.

Parent Categories

The parent interview component of this study offers a unique perspective of these successful high ability students with learning disabilities. When the parents were contacted, two reactions were uniformly expressed. First, a parent (the mother in most cases) would remark, "I always knew [my child] was bright or intelligent." Typically, the parent was somewhat surprised about the nature of the study which stressed the high ability aspect over that of the learning disability. And, in all cases, the parents knew their child was bright but not necessarily "gifted." Second, the parent commented on the need for research on this type of student. Twelve different parents, from various backgrounds and differing education, all shared these two reactions.

The core categories which were evident in data relating to parents are negative school experiences, and the parental support consistently provided to help their children achieve success in an academic setting.

Negative Experiences in School

The parents in this study corroborated the negative school experiences that their children described. In dealing with school personnel, parents found that classroom teachers had faulty perceptions of their children's abilities. To compound the misconceptions, in many cases the teacher or school officials admitted that they simply "did not know what to do" with the student in question.

Negative interactions with individual teachers were numerous and parents could easily recall the names of teachers who proved to be the most negative, stressful, and ineffective for their children. Parents remembered teachers on the elementary, and more often the secondary level, who thwarted student progress by refusing to implement instructional modifications. These modifications were suggested by the learning disability specialist, parents, and even the students themselves, in some cases. According to their mothers, negative interactions with teachers were not the only troubling aspect of public school education for these students. The parents also reported that their child had difficulty maintaining relationships with peers. These negative experiences contributed to what parents perceived as an ineffective and troubling school experience for the participants in this study.

Teacher Perceptions

Teacher perceptions of high ability students with learning disabilities reflected inaccurate portraits of student ability. Parents remembered numerous meetings with school personnel during their child's early years in which teachers told parents various reasons for the child's uneven achievement. The most common teacher perceptions remembered by the parents in this study were that the participants were immature, lazy, and/or they would outgrow the problem. Arthur's mother recalled:

> They all kind of led me to believe that he was just being lazy, that he would outgrow it. When I had the conference with [the] guidance counselor he said Arthur is just not concentrating, he will outgrow this.

Diane's mother indicated that her teachers said that she was working up to the best of her ability.

> That was the biggest phrase I have heard right through high school. You have no idea how frustrating that can be with a child that [sic] appears bright, but you can't get any help for them [sic].

The repetition of teachers' comments led some parents to question their child's ability. After several years of attending school before his learning disability was identified, Mike's parents consented to retain him in seventh grade. His teacher described Mike's work as average but said that he was somewhat immature:

> All through school we had always heard that Mike is quite bright, but he doesn't work up to his capabilities. So we decided maybe it was a maturity factor, because at that point we had been told that no, there really weren't any learning problems with Mike but that he was lazy, that he was distracted. He was all the things that they wanted to label kids.

Joe's teachers provided his parents with an optimistic view of his work in school, until it became apparent that Joe needed some type of special education.

> He acted out when he was seven years old. We were told in retrospect that he exhibited some of this in kindergarten, but he was so bright we were told that everybody thought he would outgrow it. That continued to be the story, everyone hoped that because he was so bright he would outgrow it. [That] was you know, until it was finally decided that he couldn't stay in a classroom.

One misconception concerning the nature of learning disabilities was demonstrated in the teacher comment cited below to Martin's father. When meeting with his son's elementary teachers, school staff related to Martin's father what they perceived to be Martin's problem:

> What they said to us back then was, he was a slow learner and that his mother over-mothered him. Those were the reasons they gave us for Martin's trouble. I took him to a private psychologist and had him tested.

Identification of the Learning Disability

To the parents in this study, the behaviors associated with learning disabilities contradicted the behaviors normally associated with bright children. Considering the variety of specific learning disabilities exhibited by their children, parental response to the perceived difficulty was quite similar. Parents realized their child was exhibiting patterns that were unusual but in many cases had difficulty in classifying the problem with any degree of specificity and finding help. Diane's mother told of her daughter's tendency to reverse letters and the reaction from school personnel:

> I can't even write backwards never mind upside down and backwards, and she can do that perfectly. Well I mean, it is really something to see her do it, so that was another thing that troubled us. [She] was having trouble somewhere, but you see, we weren't qualified to know where. Even the teachers, they would say, "Well, she has some form of learning disability." But you remember that dyslexia was not a name that they used then.

Kate's mother also had difficulty describing her daughter's learning problems:

> She had difficulty with her letters, and. . .she would use. . .[I can't remember what this is called now] where she would use say taxi, when the word was cab. She would use the other word for whatever the word it was. When she was tested at that time and we had meetings with her teacher and with her psychologist at school, we were told that she had a learning disability and that she was dyslexic.

Fred's mother indicated that Fred had learning difficulties that were similar to those exhibited by his father:

> I would guess the. . .one of the first major things that I noticed about Fred's problem happened when he was 1 year old. It was very obvious that he had extreme highs and extreme lows, and I think that is what first alerted me to the

> possibility that he might have some learning problems. Part of this is, I have always felt, that his father had some issues too [related to learning problems] that had not been resolved. James [Fred's father] is a very intelligent man, in fact, he won thousands of dollars in Jeopardy if you are familiar with that show. He was a grand champion in Jeopardy. Now you understand the kind of knowledge and ability to think quickly his father has. He had the second to the lowest in his grade point average in his high school class. Does that tell you something?

Teacher and School Acknowledgment of "Not Knowing What To Do"

The disparity of abilities shown by high ability students with learning disabilities was quite perplexing to classroom teachers and school psychologists, according to the memories of the subjects' parents. These students displayed academic abilities in some areas, yet sometimes could not perform the basic skills easily mastered by their classmates. These uneven strengths and weaknesses observed by school personnel were either perceived not to be a problem at the time or teachers admitted that they simply "did not know what to do." Arthur's mother recalled one such meeting:

> We had him tested at that time, and learned that he was highly intelligent [full scale score], but there was a transfer problem, so then he [school psychologist] suggested we go to a PPT, a placement meeting. The school had one of those teams [consisting of] a guidance counselor, one teacher, and I guess a special education teacher. They basically told me that there was no problem. He was obviously bright with a learning problem and that he is doing well in school. So they really had no suggestions. I kept asking them if there are different drills I can do, they just acted like they didn't know what to do with him, and they would have to give him more time.

Diane is unique in this study as her early school years occurred before PL 94-142 and the school staff that facilitated her education had less preparation or information concerning learning disabilities. Diane's mother had recognized a problem with her daughter's reading ability that did not become apparent to school personnel until Diane reached seventh grade. Diane's mother explained:

> She was tested constantly because they could find no reason for her problems. They could not explain how she did so well on IQ tests. Of course, in the lower grades she didn't have the reading skills. She did fairly well in math, but once she hit a reading problem in math, that is when she had trouble. I noticed her problems in the first grade.

Fred's mother is a teacher and she was aware of the characteristics of students with learning disabilities from her bachelor's and master's degrees. Fred's discrepant abilities were quite dramatic, yet he was not identified as having a learning disability in elementary school.

> They won't identify a kid who was reading on sixth grade level in third grade [as having a learning disability]. They just say that he is young and will catch up, but I mean he had a very wide range [of performance]. Do you understand what I am saying? He was functioning in reading on sixth grade level, and. . .if somebody gave him a writing test and scored it he would probably come out somewhere near kindergarten to low first. From the beginning a 5-6 year difference in his ability to read and his ability to write existed.

As Forrest entered junior high, his mother contemplated asking the school system to test him. The elementary school teachers did not know how to provide services for her son, and she decided to wait to see if the junior high teachers would identify his special needs.

> I just kind of sat back and twiddled my thumbs and held my tongue to wait for the phone call, and sure enough his English teacher phoned me and she said, "Oh my gosh, I don't know what to do with your son, he is so bright," and this and that, and you can't do anything and he can read but he can't write anything and I give him projects to write two or three page reports. He doesn't know what he is doing, and I kind of explained to her the whole thing and I said, "I really would like him tested."

A similar situation was reported by Colin's mother who remembers that she was called a "pushy mother" by school officials. She described going to several of Colin's teachers seeking explanations for his uneven performance. According to Colin's mother, "They just wouldn't listen" because his IQ test scores were so high. By seventh grade Colin's grades had "gone flat," and an alert member of the PPT committee recognized that Colin's high abilities concealed a learning disability.

Negative Interaction With Teachers

Parental perceptions about the overall educational experiences of the students in the study were negative. All parents provided examples of difficulty and frustration encountered by their child at different ages. These troubling time periods were usually associated with particular classroom teachers. Parents had no difficulty in recalling specific names of teachers that insulted, disliked, or refused to make instructional modifications for their child. Jake's mother reported the third grade teacher isolated her son and withheld instructional modifications:

> At the end of the year she said, "We moved kids so they never sat by the same person all year." I think she disliked Jake because she left him sitting by the room bully. The whole year he had this person who loved picking on people, and things. Apparently she just didn't like him, which I didn't realize because she was so friendly to me, you know. I worked in the room as a volunteer and when I was there she was very nice to Jake.

Jake was diagnosed with dyslexia, and simple alterations such as reading test questions to him were denied by the third grade teacher.

> She thought he was slow and stupid with a low IQ. Some of the testing there had to be given orally, because he did so poorly on the written test. He couldn't do it. He would have gotten a zero if the psychologist had not given him the tests orally. He could not do any of the written tests that were supposed to be done, but by giving them orally, his scores improved.

Joe continues to have difficulties in verbal and written expression, as well as processing auditory information that interferes with his achievement at his university. During junior high school, he was mainstreamed and received no instructional modifications for his learning disabilities. Joe's mother described his secondary school experience:

> When he went into the junior high school and high school, there was absolutely no kind of resources available to him at all. You were either receiving help 100% of

> the time, which to him (Joe) meant to be retarded and to the other kids in the school, or you were "cured," and he received resistance, if anything, from the teachers in the high school and junior high.

Joe was a physics major at The University of Connecticut at the time of the study, but has since dropped out of college. His love for science was not thwarted by the high school chemistry teacher who, according to his mother, refused to provide accommodations that would have enabled him to succeed.

> He had a really difficult time with the high school chemistry teacher. He managed to get himself in the advanced chemistry class, and then the teacher, who was clearly a well-respected chemistry teacher, refused to deal with his learning disabilities. He had to turn into her the same long written chemistry lab report which he never, I don't think he ever completed one of them for her, but it was just pages and pages and pages, which he just found incredibly frustrating. He got very good grades on all of her exams and flunked all of her lab reports, and no amount of anything would convince her that some other system might work, and that frustrated him tremendously.

Kate's mother described the testing modifications her daughter normally received in classrooms. Kate's disability occurs in language, reading, and spelling. Her frustration in this area contributed to test anxiety. Arrangements had been made to allow Kate to take tests in the special education resource room. A senior high English teacher refused to allow testing accommodations and even accused Kate of using her learning disability as a crutch. Kate's mother described her daughter's frustration:

> And then it would all start backing up on her, and she would just get into such a frustrated state that she couldn't do it then. Even some tests she was doing in school. Some teachers allowed her to go to Mrs. D's [the special education teacher] room and do the test all by herself. She was fine. But then this English teacher in the classroom used to walk up and down and look at her all the time and Kate would freeze, and that was very frustrating for her. She eventually came out of it, but she is doing much better I think now. She still does it though. I find that she still does it, and probably always will.

Jake's father was transferred to France, and Jake was able to learn conversational French. Upon their return to the United States, Jake's mother discussed the difficulty they had with teachers:

> Some teachers don't like to be bothered with children who have LD problems. He had a French teacher in the U.S., even though Jake was fluent in French, because he couldn't spell the words totally correctly with right dashes, they would. . .she gave him a D-, so there were teachers like that. There were other subjects where the teachers were so nit-picky about the little things. Even though Jake knew the concept, he had trouble with other things, little parts like the spelling, especially the spelling, and so they would give him a D, and he would get really discouraged with that.

The following statement by Joe's mother provides a summary of the negative interactions with teachers described by all of the parents interviewed:

> If you do not fit the mainstream then there is something wrong with you, and you are put down by the teachers.

Joe had many frustrations in school. Perhaps the strongest negative aspect of his early education is the following scene related by Joe's mother:

> Yes, yes, and at the PPT it had been discussed by this bubbling young school psychologist how bright he was and that she wanted to test him, and we said, "Fine, you can test him all you want." You know he has been tested so much, but then she marched in and she told him that he was talented and gifted and she was testing him for [placement in] the talented and gifted program. His scores were interesting, they are high in all those places except where the LD is. . .you know. And then when I went to her afterwards and I said, "Why did you tell him?" [about the test for the G/T program]. And of course she was bubbling and informed me that that was the way they do it, and I said, "Well, if he is also learning disabled then why does that not count?" But no, that didn't count, and that was the way it was, and I think at that time I went and complained to the superintendent. They gave him the test and said, "Gee, sorry kid, you can't spell, you can't be gifted." It was not a nice. . .it was one of the times my husband and I responded rather strongly and negatively. So that he [Joe] has always been trying to prove that he is in fact. . .the good things that he can be, but he is confused as to how to get there.

Negative Interaction With Peers

In some instances parents reported that negative school experiences were not only the result of conflicts with their children's classroom teachers. Similar experiences of negative peer interaction were described by both parents and participants. Teasing, name calling, and other similar types of peer interaction were recalled by parents who could still remember the pain they experienced as they saw their children hurt by their peers.

Types of Parental Support

In this study, parental support manifested itself in the forms of parent advocacy in the school setting, constant encouragement for their child, recommending compensation strategies, seeking support outside school, taking the time to work with their son or daughter on school work, and stressing the importance of education. Jake's dyslexia posed difficulties in high school literature classes. His mother took the time to read his class assignments aloud and found that this strategy also benefited Jake's younger brother. Jake's mother explains:

> We supported him. I mean a lot of parents say they help their kids, but I literally, four nights a week, I did homework [with him] for 1 to 2 hours. I mean this has been great because our little one when he was in kindergarten loved Shakespeare because Jake was having it. Jake was in high school then, but his little brother had the privilege of hearing us read Shakespeare and helping Jake memorize it. Jake always knew we were there, which some kids don't, and if he had trouble we would understand.

Peggy's parents supported her academic efforts by typing her papers, sometimes late into the night. Other parents such as Colin's mother and Arthur's mother helped their child in a similar fashion. Arthur's mother explains:

> The extra help that I gave him would be the typing for him. I would type it into the computer, and some of this was at 3:00 a.m. He was never one for writing in high school and that was when he would produce these large last minute papers. Then we would set up a schedule for next time, I would say, "Next time you have more

> important things, either outline by such and such [a] date, set a date and then make a date to have this much done."

Many parents had to grapple with both the nature and the type of support and help they should offer their child. Although Arthur's mother encouraged her son, she sometimes began to believe that the comments made by his teachers were true.

> It was frustrating to me because I would go back and keep telling myself that I was pushing him too much and then trying to decide that no, he needs it [encouragement] because he had no guides or projections about how he should overcome it or. . .so first we would say well he is being lazy, and then you would think, no he is really working his tail off.

Some of the parents interviewed monitored their child's work closely, as in the situation Colin's mother described:

> He will make these elaborate plans of how he is going to accomplish it and before he knows it he is right up to the deadline, and he has to cram the whole thing to finish. This happened all through high school, too. And then when he was in elementary school there were two incidents where he didn't hand in a report, a written report that I think that I was not aware of. When I found out about it, I made him do it anyway. Then I would sit down and say if you come to an English problem and you have a mental block, think that you are going to do the essay and you are not going to get graded, but you will complete it, so I would sit and I would say "What ideas do you have?" He would think of an idea, and he would say "but that is not good enough," and I said to write it anyway.

Kate's mother described her constant support as she helped Kate with her homework, even though their learning styles differed:

> You know I always tried to work with her on homework. I tried to explain things to her. I have to explain something to you. We are both Irish, my husband and myself. We learned things differently, so we have old methods of learning. At times I would be trying to explain to her our methods of doing the way I did it, and of course, it wasn't the way kids do it in school nowadays, and that caused conflict every once in a while. But we got over that hurdle and we worked it out as best I could, doing it her way. But I like to check her homework, help her with her homework if she had a problem, explain as well as I could how to do things. We had meetings with her, those teachers that she saw two, or three, four times a week. I can't remember what they are called. Like her special education teacher that she had. We had meetings at least three times a year with those teachers and with her regular teacher.

Martin's father asked to be interviewed for this study [he was the only father to volunteer]. He had taken the responsibility of ensuring that his son received an appropriate education. At home Martin's father encouraged Martin by allowing him to lead activities, participate in projects, and by asking Martin questions about the work in which he was involved.

> I think that from the earliest date he would work along side of me. We were at home doing things around the house and he had an extraordinary interest in what I was doing, and I used to test. . . .I used to let him try to lead the way almost as a 4, 5, or 6 year old I would ask him, even though I knew the answer myself, "well

> Martin, what is next?" And he would lay that right out as clear as a bell and I think that I noticed most of all he had extraordinary creativity.

The participants in this study were, on occasion, difficult for their parents to work with. Mike's mother explained the difficulty she had in simply trying to get him to sit still and do his homework:

> Well I don't think we gave him a lot of support with his school work. I mean he had a tremendous need to be on the go, and to play sports and to do all that. We fostered it. We really saw everything that he did, and we were aware of who he was with. We would try to sit down with him. I mean I used to sit and read to my oldest son who would sit for hours. I would try to do that and he would say, "This is boring me to tears!" and he would be off my lap and off he would go. He just couldn't be there. I would try to sit down and talk about what they were doing in school, and he would make some humorous. . .now I say humorous. It was his attempt at wit, as he got older, some of the humor was very annoying, because it was a way of sliding out of things. "Mike, tell me about what you are doing in science. What are you studying?" "Oh, we are doing some boring stuff that wouldn't interest you. It would probably make you want to slit your wrists, it is such awful stuff." While he is doing this he would have a ham sandwich in his hand, and say, "I will see you later."

Early Evidence of Above Average Ability

The parents related a variety of scenarios that occurred early in their child's lives that provided evidence of the advanced intellectual ability of the subjects in this study. Each parent discussed specific examples of ability and creativity that his/her child displayed. Martin's mother described the way he creatively answered questions, which led her to believe that Martin was indeed bright. Martin's mother explains:

> He was very creative, even if he wasn't 100% right with answers to questions. He would come up with such a plausible explanation about things that I could tell that there was some brilliance there.

Several of the parents were able to provide examples of the specific talents of their children such as verbal precocity, manipulation, art or musical aptitude, and reasoning skills. Jake's mother remembered:

> Oh, I think he was, let's see, he would have been 2 1/2 or 3 years old and he could put together any of the Lego kits. He would play for hours and create things, not just stack them up, but create quite intricate vehicles with the Legos. I think that was my first sign [of his advanced ability].

Advocacy by the Parent in the School Setting

All of the parents in this study described their repeated efforts to communicate their children's special needs to school personnel. They described meetings they requested, additional assessment they requested, and modifications for their youngsters' school environment or class. These advocacy efforts sometimes resulted in positive actions for their children and in other situations they resulted in the parents being labeled "pushy," according to parental perceptions.

Many specific examples of advocacy were recalled by parents. Jake's coexistence of high academic ability with a specific learning disability remained unaddressed in junior high school. His mother reported that Jake was increasingly bored in his math class. She knew that Jake had mathematical abilities and pursued this with Jake's math teacher, requesting that he be moved to a more challenging math group.

> He was having trouble because he was bored in the math, so in seventh grade he was getting a D. Instead of putting him back a lower grade, we upped him into pre-algebra. . .and then I think he ended up with a B or an A in that course. He was having trouble because he was bored. . .which I think is a sign of intelligence sometimes.

Stressing the Importance of Education

The parents in this study also had a unique similarity in that they all stressed the importance of education with their children. These parents have varying educational levels, yet for their child, postsecondary education was encouraged (for all participants except Diane) despite the concerns they might have had about their child's current or recurring academic performance. Forrest's mother describes her encouragement for Forrest to pursue a college education:

> That is hard to say, both of my kids have been. . .well ever since they were babies there has never been any discussions around them by (inaudible) "well maybe you will go to school some day, maybe you should think about something to do with your life." It has always been, "What are you going to do?" And "When you go to college." That is it, that has been my philosophy since I, you know, since they were little and I was here. You are going to be going to a university someday, so try to take something you are really interested in and focus on it, and many discussions when they were in high school, "What do you think you are going to want to do? Why do you think you are interested in it?"

Forrest's mother continued:

> I have always tried to instill a desire to learn as much as they could and get as far as they could so that they could always take care of themselves without having to rely on anybody else being there, and I guess it worked because they both are doing. . . . They are both bright kids, and they are both wanting to go to school and they have goals and ideas of what they want to do with their futures which is something I didn't have when I was their age. I mean I was 18 and I had Forrest so that is probably a typical reaction of the parent. I didn't have it so I want them to have it, but I knew what I went through when I got here alone, and I didn't want them to ever have to go through that. I have always tried to instill in them the fact that if they wanted to be able to take care of themselves, they had to have an education so they can get a quality job, and quality jobs are not gonna go to the kids that have a high school education, even bachelor's, you have to have a master's degree nowadays.

Arthur pursued physical therapy but when he was denied entrance into the program, he changed majors and tried again. When asked what motivated him to pursue a college education, his mother responded:

> Well, he comes from a family where his father and I think he can do it. We feel that he needs it and that it is important. Most of our friends all have college degrees and I have never let any of my kids think they weren't going to school because I didn't go to college. My parents didn't consider it important, so when my kids hit kindergarten I said, "OK, you have to keep thinking what you are going to do in

> college." I wanted them just to assume [that they were going to attend college]. I didn't really want to give them an option.

Recommending Compensation Strategies

Though few of the parents in this study had professional training in special education, they realized that their child learned differently. Parents often recommended compensation strategies and study strategies that were effective for the child's education. To Colin's parents, his inability to spell was of little concern. His parents are both actively involved with computers and a word processor easily compensated for his inability to spell. Jake's mother also realized that a word processor would compensate for her son's learning disability. She also read books aloud and discussed the plot with Jake, or found required books in abridged form for him to read:

> I learned a writing assistance program so I could teach Jake how to use it. One of the things the tutors said would be good for him was a computer. We read Shakespeare so he could understand what was going to happen. It is really hard with the old English to understand, so every book he had to read up until his junior year in high school was basically read out loud here by him or me. Very few. . .I think a couple books he read himself, but it was just something. . .I knew how hard it was for him and it helped him comprehend it, and like for memorizing them I would make file cards up for the piece and put it in the garage near his work bench and in the bathroom on the mirror.

Forrest's mother encouraged him to advocate directly with his teachers for extra help:

> I could see that he was starting to study more. Things were taking him longer than they had previously taken. I encouraged him to go for help after school. I always told both of my children, "If you are having any trouble, talk to your teachers and stay after school for extra help before it gets ahead of you."

Parental Perceptions of Talents

Most parents described surprising incidents in their child's early life of their ability to manipulate objects. As this theme emerged, it became clear that parents were describing various spatial abilities in which their child excelled. The incidents of spatial abilities were described when parents were asked to illustrate situations in which they believed their child to be bright. Diane's mother gave one example:

> No! I wouldn't have considered her bright except that she was very, very mechanically minded when she was very young. She used to take locks apart, put them back together. One time she took all the locks in the house off the doors.

Diane's mother perceived her as being extraordinary with machines as well as being able to compensate for her dyslexia with the use of word processors:

> And they still couldn't define it, and of course, once she got out of high school she knew she had to go to computer school, and she did very well there. But you see, there wasn't a lot of reading there in the machines. She could take anything apart and do that. This is where she excels. You know very well she wouldn't be where she is now if we didn't have the technology.

Arthur's mother described his early spatial interests:

> He liked more of the mechanics. He was more into how something would work. Not one thing in particular, but he would take something apart that was broken.

Joe's mother reported the same behaviors:

> Well, he was always a bright kid. He was always incredibly curious and fiddled with everything. He took everything apart.

The ability to manipulate objects and find swift solutions were described by Mike's mother's example of his solving the Rubic's cube puzzle:

> In the beginning we ourselves thought that Dan [Mike's older brother] was pretty bright, so we had brought home the Rubic's cube when it first came out, and we gave it to him and it frustrated him to no end. He finally worked at it and he got it, but Mike had it done. He sat down with it and it was done the first time that he did it, and just always was able to come up with a quick sort of thing.

Parental Views of Children's Personal Characteristics

The students in this study have unique personal characteristics that their parents believed were responsible for carrying them through tough educational experiences. Their personal characteristics, according to their parents, included: determination, stubbornness in the face of adversity, integrity, the willingness to work hard, and social skills. Arthur had the benefit of teachers who allowed appropriate modification for some assignments, however his mother attributes his success to his hard work.

> Because Arthur had difficulty with reading, he did have three teachers along the way that allowed for extra time on some tests and assignments, but for the most part he struggled through and always worked harder than everybody else. He really worked hard himself, and started thinking seriously about his grades. Up until then it was really a push.

Fred's mother described him as willing to put the effort into a meaningful learning experience and indicated that he was not easily discouraged:

> Well, I think he has always been a kid that. . .wasn't discouraged. I mean he should have been discouraged looking back. I think it was just life was pretty lousy for him in a lot of ways. I think he could have been discouraged, but he seemed to have a pretty good disposition. He was a lovable kid, and a lovable child and I think he and I had a good mother-son interaction there because he was an easy child, and I think he just liked to please. I think he had a pretty decent self-image and enjoyed learning. I think he had a lot of experience in the things that he enjoyed doing. I mean he could always do it. . .when he liked it, something like planets or astronomy or something. If he is into it, I think he gets such intense enjoyment about learning and doing things that he likes to do. That is its own motivation, because again, it is selective attention. If he loves it, you can't pull him away from it. If he doesn't like it, it is like pulling teeth to get him to do it. I would guess that it is his own interest; he motivates himself.

Diane's mother described her daughter's determination and drive that kept her going through many tough times:

> Diane has tremendous drive. Oh lord! And one of the things you cannot tell Diane is that she can't do it. And she will take a challenge on. . . .I mean something like

> it was all a drop in the hat, you see that. I think this is why she went for the Ph.D. because most people didn't think she would get her master's. Diane wanted this Ph.D. so badly that it is just drive.

When asked what motivated Diane, her mother responded:

> What do I think motivated her. . . .I think she has got the intelligence and she hated to be classified as slow.

Diane had indicated during her interview that she wanted to conquer the system.

Martin's father considered his son a perfectionist and added that Martin is extremely goal driven:

> Martin is a perfectionist. He wants to do. . .he wants his life to be as perfect as possible, and he is driven by some inner drive to achieve that. He is very much goal oriented. He has a very strong commitment to a goal and I believe that is what carries him through.

Mike's mother described his amiable personality and quick answers as characteristics that have endeared him to others and facilitated his current college success:

> He had a quick answer, an appropriate quick answer, and from the time he was about 2 1/2 years old, he could really make people laugh. He was very, very witty. We knew when he was probably about, I would say about three years old that he had a sense of humor which was probably a little advanced for his age. Some people used to say he was worldly, but he had no reason to be that way from our household, so he just seemed to have a knowledge about things that he could extrapolate whether it was from TV or whatever he heard.

Forrest's mother recalled personal characteristics that sometimes made life at home difficult, yet these same characteristics benefited him in his pursuit of a college career:

> He just learns things quickly. Forrest has always learned things quickly. He is very stubborn, not just with me but with his school work. And he is very competitive also. He competed with his sister in academics, trying to make better grades. Making the honor roll and things like that. Sometimes this caused problems, but they get along well together.

Problem Solving

The participants in this study were perceived by their parents as having unique abilities in the area of problem solving. Several parents were amazed by the ease with which their child could solve brain teaser type problems, such as the situation described by Mike's mother:

> Dan (Mike's older brother) would present us with a problem at the table, and say, "Could you help me with this? They think I can do this stuff," and his father would say, "Dan, I could try all day and I couldn't do this," and he couldn't. I would sit down and if I really worked at it for a very long time I might come up with it, but Mike was 8 or 9 years old and he would say, "Come on, Mom, you can do this," and he would have it answered. He would just have the answer, he would read it and he would have it. When the video games came out, he was always better than

> everybody else. He could outwit his father at checkers and chess and those kind of things.

Jake's mother related his ability to solve math problems and puzzles despite his severe dyslexia:

> Jake was always good at puzzles and things like brain teasers. We used to go camping and one of the other people would bring brain teasers. He was always good at putting them together rapidly. I know Jake's dyslexia is pretty severe, but he seemed to be able to cope and blend in without this being a real big problem, such as math in high school and things.

Parents Seeking Help Outside the School System

Most of the parents indicated that they had, during their children's schooling, sought help outside of the school system. Their frustration with the schools and the types of assistance needed by their children often caused these parents frustration, and resulted in outside professional help being sought for testing, counseling, and compensation strategies.

Arthur's mother recalled why she sought an "outside" psychologist to test him:

> I wouldn't say I ever thought that he was a genius, but I just always thought that there was more than teachers led me to believe, and the reason I had him tested was because one teacher (inaudible) and I thought he was bright.

Arthur's mother then decided she had had enough of the school testing:

> Through kindergarten and nursery school everything was according to what his age level should be, so we put him in what now is considered early. In first grade he started to be distracted very easily from his work. By the end of first grade his reading was OK and he was doing OK in school, but socially the teacher and we decided he should repeat, so we detained him in first grade, and that time we called it daydreaming. In about fifth grade he did an achievement test, he scored very poorly on it. So I went into the guidance counselor's, and I said, "This can't be, I cannot understand that score and then he (the school counselor) told me he was 94 or 95% verbally. In seventh grade, when they were suggesting that he go into the average classes, that is when we decided that we would have him tested outside, and decide what level he should be in, because he has above level classes and average classes mixed.

Mike's mother also sought testing outside of school:

> In a way I hold myself benignly responsible for this, although I did have him tested by two doctors. I knew there was something different, but it wasn't conclusive in my mind because my only other experience with parenting and rearing in an academic environment was another child who went to his room, did his homework, studied his piano. He never needed to be reminded of anything. And then there was this other boy who never did. . . .Mike never did his homework, you have to understand. Never ever did I see him doing anything academic. I would say, "Mike, do you have everything done that you have to do? Can I see your papers?"

For Forrest's mother, a vague memory guided her to seek help outside of school at a children's hospital which specializes in neurological problems in children, and proved to be a supportive resource:

> They tried to tell me that it was my fault and that he was under stress and strain and this and that. So I took him to a children's hospital. I knew about this hospital because I lived in Connecticut most of my life. When I was in Connecticut as a teenager I could remember that various members of my 4-H groups and girl scout troops had gotten various kinds of work at the children's hospital and so it was in the back of my mind as a place to go for help, so that is why I took him.

Joe's mother sought help from a psychiatrist for her son:

> We had also by then started to take him to see a psychiatrist who did not recognize his learning disabilities even though he was told the whole story. We didn't know either [about the learning disability], because we did what everyone told us. It is very frustrating.

Among the parents interviewed, several actively sought information on learning disabilities and their relationship to their child. Martin's father explained:

> There was a period of time when I remember being frustrated with Martin because I knew he was creative, but I saw that he wasn't making the grade and I didn't know why until I did my own research into it. I remember spending hours and hours in the library studying learning disabilities.

Other parents reflected on what happened to both their child and other children who were different. Joe's mother was eloquent in her remarks:

> Well, I find it so frustrating. I have worked with retarded kids, actually I taught in special education at one point and I find it so difficult. I think it is the mandates and I understand mandates, and I understand equal opportunity in education, but I find it so difficult that the public schools do what they are forced to do by mandate, and they are forced to provide special education for kids who fall into certain brackets. But I find it completely frustrating that a kid who does not fit the mold, that they have established what should be the average student is given such a short stick and is treated very poorly, at least that was our experience in our district. I can tell you about other kids who were not in a special education program. Kids whose careers I have followed because they were kids Joe knew in elementary school who were talented and gifted and in the talented and gifted program in elementary school who ultimately were hounded out of the school before they graduated, kept back because they wouldn't do their homework. I mean I am thinking of one young man who was made to repeat one of the junior high grades because he wouldn't turn in his homework. It was ludicrous to ask this boy to do this homework, but he would not fit the mold, so they broke him instead of breaking the mold. It is very frustrating and it is even more frustrating when it is a kid with a learning disability.

Martin's father regrets that many of his efforts for Martin were not made until after he learned, through Martin's summer camp experience, about what could be done for him.

> The farther he went in school, the clearer it became that he was capable of handling the most difficult curriculum that was offered. The only thing we regret with Martin is that we didn't discover that early enough to put him in the highest levels of the classes until he was in high school.

Seeking Outside School Support

Joe's mother helped locate a university that offered a support program for students with learning disabilities. She also helped him complete all the necessary forms for university admission. Kate's mother also sought a university program that offered services for students with learning disabilities:

> We had gone to a meeting before she started high school, in Harrison, New York. We had gone there so Kate was able to meet teachers, college students who were already in it [a university program for learning disabilities].

According to her mother, this meeting also had an effect on Kate:

> I think at that point she got very determined, and said that was what she would like to do when she got into college is to be able to work with handicapped dyslexic. . . children and to see if there was anything she could contribute to it, and to get those programs started, you know, and keep them going. I think there are probably a lot more programs going on now than ten years ago.

Other outside school support was sought by Martin's father. He located a private school that specializes in learning disabilities, and enrolled Martin in their summer camp program. Not only did this program aid Martin in compensating for his learning disability, but the staff at this school sent their reports to his public school and even provided inservice for his regular classroom teachers.

> [The private school] was a school that dealt. . .to my understanding solely with dyslexic children. They drew their clientele from all over the country, in fact, all over the world. They dealt with a range of kids between the ages of 9 and 14, and then another school picked up at 14 to upper teens. So Martin was one of their youngest students. The way it worked is, during their regular school year you were an in-house resident. This place was up in Central MA. What they offered us was for $3,000 we could have Martin stay for 8 weeks during the summer. It was their summer session, and Martin would go up there during the summer, live up there and the student teacher ratio was 2 to 1. There was one teacher for every two students and the teachers were all special education teachers with specific training in dyslexia. This is what we were paying for, we were paying for [the school's] professionals. That would be the teacher and the school psychologist and specialists to craft the learning program that was specifically tuned to Martin's deficiency. In other words, they would do their own battery of tests and then they would create in 8 weeks time exactly how does Martin learn, how does he compensate and determine what kind of skills does he need to compensate? They would teach him those compensation skills, and they graphed a teaching program, and they agreed to come down to our school district to inservice Martin's special ed teacher at the end of the summer.

This advocacy and constant support for their children was a recurring finding with each parent.

Parents' Experience of Similar Learning Problems

It was common to find parents who had also experienced difficulty in school. Many of the mothers in the interviews recognized the same learning problems in their child that were also present in their husbands or other family members. Forrest's mother recalled similar problems that his father had during high school:

> I wouldn't be surprised if he had some of the same problems Forrest does based on the fact that I knew him when he was in school. Forrest's father always had trouble studying. I don't ever remember seeing him reading a book, magazine, or newspaper.

Colin's mother recognized that many individuals in their family had similar learning problems and Peggy's mother also indicated that her other children also had varying difficulties with academic tasks.

Lack of Father Support

Another theme was described by several of the mothers in this study regarding the role of the father. Typically, the father of these students was supportive in terms of financial suport and general family support but was absent from educational considerations, and unfortunately had difficulty with the concept of their child having a learning disability. Diane's mother explains:

> Well, everybody supports Diane for everything she does. I think it was harder for maybe my husband to recognize. I think most men or most fathers do not want imperfections in their children, especially in the age group that we are in. They are not as tolerant as fathers I hope are today, because I don't have any grandchildren so I don't know. In all, he is a very busy man, you know he had a lot of outside work to do: meetings, meetings, meetings in all of his work. He was often gone three weeks out of a month.

Arthur's mother put it quite simply: "My husband would leave most of those decisions about school to me." Kate's mother voiced a similar belief: "We were interested in finding the best education for her, especially myself. Not knocking my husband or anything like that, but he was not as involved as I was."

Research Questions

Research Question 1

What are the self-perceived strengths and weaknesses of gifted college students with learning disabilities?

Participants were asked on the self-report questionnaire and in their interviews about their strengths. Most reported strengths in terms of school performance and outside interests. Parents were also asked to describe student strengths and in some cases their perceptions were somewhat different than the participants' perceptions. The participants' acknowledgment of strengths on the questionnaire is presented in Table 7 (p. 35) as are their own analyses of the specific nature of their learning disability and other data related to research questions two through four.

As can be noted on Table 7, students' self-reports of their strengths indicated modest responses. Four of the respondents did not identify any strength area and one said he was average. Of those who did list a strength area, two included conditional statements indicating that they were either "stupid on homework" or "not great."

Participant and parent interviews indicated a number of strength areas besides those listed on Table 7. Students consistently identified their motivation, work ethics and habits, and their patience at learning to keep working at strength areas. Others elaborated on their responses. Martin explains:

> I had a deeper insight into things. I had a deeper thought process. I understood things in my own eyes, but I could never, even now I can't explain what I think and what I feel, my analogies. I am a great 'analogizer.' I can really draw parallels between certain things, deeper than just the basic, everyday knowledge, you know, like if somebody asked me the presidents, I don't know that kind of stuff. I don't know the specific kinds of things, but I know concepts. I know the whole background.

Parents also believed work habits and determination to be strength areas of these students.

Research Question 2

What were the specific natures of the learning disabilities of the individuals in this study?

The specific natures of the learning disabilities as described by the participants in this study are summarized in Table 7. These responses closely parallel parental descriptions of the natures of the learning problems. However, in some cases, parents could not technically describe the learning disability to the extent that students could. All participants could specify the nature of their learning disabilities, but not in the same terms used in their UPLD files.

Several commonalities existed for participants in this group related to the nature of their learning disabilities. All participants mentioned problems with spelling, handwriting, and with reading at one point or another in their school experiences.

Research Question 3

When and how were students identified as having learning disabilities?

Students' self-report responses, summarized in Table 7, were identical to reports from their parents and their school records about when they were identified as having a learning disability. As discussed previously, problems existed with the identification of many of these students and, because of their high ability, the testing that was conducted to identify them as having a learning disability often resulted in contradictions. Consequently, eight of the participants were identified in their middle or high school years. Several of these participants' parents were told that they were too bright to be identified as having a learning disability. Parents were also told that their children's achievement test scores could not possibly be as high as they were able to score if a learning disability truly existed. Accordingly, most participants were not identified until later in their school experience and some were not identified until a professional outside of the school system administered tests, and wrote a report that was later submitted to the district. As noted earlier, one participant was not identified until he sought help for his learning problems at his university.

Research Question 4

Were these students also identified as gifted?

As can be noted in Table 7, only one student (Colin) was actually identified as gifted in ninth grade, but he never participated in a program because one did not exist at this grade level in his district. Another student (Joe) was nominated and tested in grade six, but was never identified because of his lower scores on an entrance examination.

Research Question 5

What is the collective view of this population regarding their treatment by others and others' perceptions of them (parents, teachers, peers, and guidance counselors)?

It is clear from the data that the collective view of these participants about their school experience varied both by participant and by group providing treatment (parents, teachers, etc.). For many, their memories of school and most teachers were clouded by negative and painful incidents that may have occurred at only one or two grade levels but which seemed to dominate their memories. These painful negative experiences were always verified by the parents of these students who seemed at least as angry as their children at their poor treatment. In several of the interviews, participants recalled, often with tears in their eyes, the punishments or recriminations given to them because they could not work as quickly or efficiently as their peers. At these times, the interviewer often fleetingly thought of "education malpractice" and how little was done to change the behaviors of these teachers, some of whom are still in classrooms. As mentioned previously, the negative experiences almost always overshadowed the positive and, unfortunately, this may have clouded the collective perceptions of this population. When specifically asked, all could recall at least one teacher, counselor, or other educator who had provided a positive experience.

The importance of their mothers' support was unanimously discussed by all participants. Fathers were not regarded as playing an integral role by most participants, but mothers played essential advocacy roles, as mentioned earlier. The mothers of these students spent long hours helping with homework, writing, study skills, and compensation strategies. They sought outside help and information, and often challenged school district personnel who frequently readily admitted that they could not solve the problem and did not know what was wrong or what to do.

Research Question 6

Were modifications made in the instructional practices and educational programs designed for this population?

Modifications were not made until the subjects' learning disability was identified, indicating that changes were *not* made in most elementary schools for the majority of these persons. Occasionally, a kind and well-intentioned teacher would attempt to provide individualized instruction or to modify the mode of teaching or learning but, according to participants, this occurred rarely and inconsistently. When it did occur, it did not address the compensation strategies and learning skills that these students indicated they so desperately needed. Unfortunately, even after many of the participants were labeled as having a learning disability, classroom modifications were sometimes withheld. Teachers did not understand the learning problem and occasionally accused these students of "using an excuse."

One surprising finding that has not previously been mentioned in literature on this population was the variability of special education interventions when classes or services were provided. Many of the participants recalled with resignation and disappointment the content of their learning disability special education programs which often seemed to have no clear goal or purpose and which further seemed to be designed for slow learners. Repetition existed from year to year and seldom included in these programs were the study skills or compensation strategies that were an integral part of the college program they experienced later.

Research Question 7

What were the positive and/or negative effects of labeling (either gifted and/or having a learning disability) on this population?

Only one participant was ever labeled as gifted, so no conclusions can be drawn about that label. The label of learning disability was met with diverse responses by subjects and parents. Some parents were relieved because a label was finally attached to a problem that they and their child knew was present. Other parents were guilty because they believed they should have done something earlier, or sought more testing or been more adamant about modifications. Some of the participants were relieved to know they finally had external verification of a problem they knew they had. However, a high number were unhappy about the label and either believed that they had something wrong with them or that they really didn't have a problem but were, instead, to blame for their learning problems.

Eventually the relief felt by some parents and participants subsided after subjects were identified, and discontent often surfaced again when it became apparent that certain services and support systems were not being provided by the schools. At this point, many parents and students became disillusioned and sought outside help, information, testing, alternative programs, or private schools.

Research Question 8

What specific educational intervention and assistance, program, or strategies does this population need in order to realize their potential and succeed in an academic environment?

Several strategies and types of assistance and programs can be suggested for this population as a result of this study. Learning disability specialists should be provided with information about the needs of talented and highly able students through staff development, and a special attempt should be made to identify the strengths and talents of students with learning disabilities. The types of compensation strategies, and study and learning skills that these students learned during the University Program for College Students with Learning Disabilities might benefit younger students. Perhaps, if some of these skills can not be introduced to *all* students with learning disabilities because of the level of difficulty or sophistication involved, they can be taught to a cluster group of high ability students with learning disabilities.

Baum (1985, 1988) advocated the use of an enrichment program focusing on student strengths and interests such as The Enrichment Triad Model (Renzulli, 1977) with these students. The data analyzed in this study support this as well. These students often expressed their desire to have their strengths and interests addressed in their school experiences.

A counseling program or the availability of a trained counselor may have been helpful to some of the participants who had problems reconciling their abilities and their disabilities. Several sought counseling on their own when they became older, but it appears that they may have been helped earlier if counseling programs had been readily available.

Parent support groups may also have benefited the parents of these students who often could not discuss their frustrations or problems with other parents who had common experiential bases. These parents also did not have a great deal in common with other parents of students with learning disabilities who had different abilities. Unique problems existed for this group of parents because their youngster *seemed* so bright and was often so verbal, but did not perform well in school. Lower ability students may not have been consistently told they were lazy, immature, or a host of other adjectives that added up to the same generally negative description made about high ability students with learning disabilities.

Research Question 9

Were executive functions as described by Denckla (1990) including metacognition, proactive organization, self-regulation, and motor control employed by the gifted students with learning disabilities included in this study?

Executive functions are defined by Stuss and Benson (1986) as planning and sequencing complex behaviors, paying attention to several components at once, the capacity to grasp the gist of a complex situation, the resistance to distraction and interference, the inhibition of inappropriate response tendencies, and the behavior to sustain behavioral output for relatively prolonged periods (p. 158). Each participant in this study used some of these executive functions as they related to the specific learning problems he/she experienced. In fact, most participants described in their interviews the personal plan that they had developed which incorporated one or more of these executive functions. Fred explained how he learned to stop making inappropriate responses as he got older. These responses had often surprised him as they "exited from his mouth" when he was younger and inevitably caused him both problems and negative consequences.

Denckla (1989) defined executive functions somewhat differently, including provocative organization and planning strategies. It is clear that the participants in this study used executive functions as described by both researchers. Numerous examples of their planning skills are included in the findings.

CHAPTER 5: Conclusions and Theory

It is clear from the data collected in this study that some high ability students with learning disabilities have negative experiences in school. It is also apparent that some students in this population succeed in an academic setting despite these negative experiences. In this chapter, the major findings of the study are discussed, a theory about the intersection between abilities and learning disabilities is offered as are the implications and limitations of the study.

Major Findings

The major findings in this study incorporate the results derived from the core categories and the responses to the research questions discussed in Chapter 4. The negative experiences the participants had in school as well as the ways they incorporated these experiences into a successful academic college or university program lead to the discussion of the findings which follows.

The Combination of the Learning Disability and the Student's Giftedness

Many of the negative experiences experienced in school by the subjects of this study were related in some way to the combination of their giftedness and their learning disability. It was the combination of their abilities and disabilities that caused the participants in this study either to be identified as having a learning disability later in their academic careers, or hampered their identification as having a learning disability in the years that services that might have been provided to them during elementary and secondary school. It was also the combination of their abilities and their disabilities that caused them to be negatively perceived by their teachers and, in some cases, their parents. Unfortunately, the abilities of these students were clearly reflected in areas other than those which are reinforced and valued in school. Hence, their talents in spatial areas and in the creative tasks at which many of these students excelled caused their teachers and parents to believe that their relatively poor school performance was due to laziness or inattention. In the schools that these students attended, literacy skills seemed to be emphasized often to the exclusion of most of the other talent areas at which these subjects excelled. This attention to reading, writing, and verbal skills caused many of these students to have doubts and confusion about their own abilities and to question why they could not do the things that many of their peers could accomplish with seemingly little effort. Accordingly, it was not just the presence of a learning disability that affected school academic success. Rather, it was the combination of giftedness and the learning disability that created many negative school experiences for this population.

The Relationship Between the Particular Type of Learning Disability and the Students' Gifts and Talents

The participants in this study were able to resolve the conflict between their abilities and their disabilities in one of three ways. First, some participants struggled to gain the compensation strategies needed to directly address their learning disability and become successful in an area that may have initially appeared difficult if not impossible. This was, in large part, due to the participation of certain subjects in the University Program for Learning Disabilities. This enabled their talents to emerge as they used strategies to overcome or at least compensate for their learning disability. Evan, for example, became a political science major despite a learning disability which hindered his skills in writing and reading. Second, a smaller number of participants selected an academic direction in which they had strengths *and* which was not dependent upon the acquisition of compensation strategies or the mastery of an academic discipline that was affected by their specific learning disability. It is clear that this was only possible because these students were in college and could select a major area in which their specific talents emerge. For example, Peggy's musical talents caused her to pursue a major in voice, thus enabling her to avoid the continued struggle to compensate for her numerous learning difficulties in academic areas. This option is not available to an elementary or secondary student who has either no choices or extremely limited academic choices in school. Third, the majority of participants in this study combined the two options mentioned above as they attempted to both compensate for their learning disability and also select a major area of concentration in which their specific learning disability affected academic performance. Colin pursued a major in electrical/systems engineering thereby enabling him to focus on his strengths. He had to obtain compensation strategies in order to be successful, but he did not have to use them to the extent he would have had he majored in an area that required him to primarily use reading and writing skills.

The Negative Climate That Existed in Elementary and Secondary Schools for Most Participants

Unfortunately, most participants in this study encountered an atmosphere in school in which they did not have positive experiences. Rather, the data collected from participants, parents, and numerous school records indicate that the schools that these students attended and the teachers with whom they interacted were not often helpful in the development of their academic success. One might even hypothesize that some of these students achieved in spite of their elementary and secondary school experiences. There were, however, educators who had a positive impact for most of the subjects in this study and some of these persons (counselors, specialists of learning disabled students, or teachers) had a positive and lasting impact. It must be noted, however, that these educators were the exception rather than the norm.

The Acquisition of Compensation Strategies and Study Skills in College Through a Program for Students With Learning Disabilities

The majority of the participants in this study believe that they learned most of their compensation and learning strategies in college despite their participation in a program for students with learning disabilities at some point during elementary or secondary school. Unfortunately, these programs, according to the perceptions of the students in this study, often focused on remediation of content or the opportunity to do homework or catch up on work missed in class instead of teaching the compensation strategies necessary for independent learning and self-reliance. Their participation in a university program for students with learning disabilities provided their first opportunity that participants had for training in compensation and learning strategies. This program was essential for the participants in this study.

Special Talents Such as Spatial Skills or Intense Interests

All of the participants in this study had special talents or interests which were usually manifested in out-of-school or within-school extracurricular activities and which enabled them to ameliorate their negative school experiences. These talents and interests were recognized and often nurtured by parents and seemed to contribute to the positive sense of self eventually developed by some of the participants in this study despite their negative experiences in school. Many of these students excelled in athletics or sports;

others had hobbies or intense interests outside of school. Most excelled in spatial areas that were not rewarded or paid particular attention in school. The possession of these spatial skills, talents, and interests often allowed the participants of this study to put their negative school experiences in a more appropriate perspective. Some reasoned that if they were so good at something, they did have talent and perhaps they just had to work harder to be better at their academic work. It must be acknowledged that without parental support, the ability to be able to pursue the sports, hobbies, or extracurricular activities would have been lessened. Many of the parents of participants in this study actively sought out opportunities for their children to excel in order to compensate for their poor performance in school. This appears to be a reciprocal relationship in some ways. A child does poorly in school and his or her parents, sensing that their child is bright and talented, look for alternative ways in which the talent can be manifested. This, in turn, causes the parent to invest time and capital into looking for ways to nurture talents. Once this occurs, the child begins to feel better about his/her talents and begins to think that achievement might be possible in other areas, such as school performance. It was the development of these talents which often provided these students with the belief that they could excel in something if they worked hard at it, and if they could do something well, perhaps they could do better in school if they applied themselves and worked harder at it. This belief in themselves often caused them to work much harder at their academic work. Ironically, the hard work was necessary because of their learning disabilities, but it was the acquisition of this work ethic that caused many of these students to work harder and become extremely successful in college. This "cycle of reciprocal talents" existed for participants in this study. Once they learned that they could excel in another area such as athletics in school, or mountain biking or creating miniatures or vocal talents out of school, they often began to believe they could achieve in school. And, eventually, most did.

A Theory Related to the Process of Creating Academic Success

Each of us who has become a parent or who works with children instinctively understands the desire to shield a child from pain, embarrassment, and circumstances in which acute discomfort exists or may develop. However, at each step in the process of independent living, possibilities exist that children may, and most likely will, encounter adversity. The process of facing and overcoming problems strengthens some children and enables them to emerge from difficulty stronger and with a resolve to meet future challenges with newly acquired personal strength. For others, despite strong support from home and subsequent positive life experiences, the problems faced as a child leave scars. And some scars, while they heal, are carried as a reminder of pain, frailty, or one's inability to succeed.

The students involved in this study shared a common challenge: they were all very bright and all faced problems learning. Many encountered these difficulties at the earliest stages of their school experience. Many, because they were so intuitive, questioned why they didn't know things that their peers knew. Peggy noticed in kindergarten that she could not recognize the colors her friends knew and that she could not conceptualize the numbers that her peers were calling out while busily manipulating corresponding objects. Diane, in second grade, was horrified to realize that reading meant interpreting the symbols under a picture instead of memorizing the story that her mother or teacher had read to her. As persons in this study developed an understanding about their learning problems, different circumstances affected their ability to understand and mold the learning disability into a form that could achieve academic success. At this stage, questions and concerns entered the process, causing the participant to ask: "What is wrong with me? Why can't I do this more quickly? In some cases, comparisons were drawn among and between peers. "I'm just as smart as she is. I know I am. Why can't I read like she does?" The specific nature of the learning disability had a direct impact on the questions and concerns that emerged for each participant. Some spoke of being two people: an inside person who was competent, verbal, quick and witty, who always knew the correct response, but who could not get the "outside person," who was not at all bright, to speak the correct response. This struggle between the two selves, one who was smart and the other who was not, was an image that most participants struggled to reconcile throughout their lives. The personal struggles that some of these students faced produced a unique blend of perseverance, determination, and what some mothers categorized as "sheer stubbornness" to succeed. The struggle produced positive results, but, unfortunately, also left scars.

The delay in the identification of the learning problems of these individuals was also critical to their process of understanding and dealing with the learning disability. Those participants who were identified at a younger age were not plagued by having to speculate about what was wrong with them; however, this early identification did not always protect them from negative and painful experiences with teachers. Because a learning disability cannot be seen and because many of these participants were so bright, some teachers and even parents were suspicious that a problem really existed. Some of these students who were identified early recalled incidents in which their teachers refused to make modifications and told them to stop using "excuses" to gain more time or alternative methods of assessment. For participants who were not identified until high school or college, an entirely different set of problems existed as they were repeatedly told they were lazy, or not as bright as their IQ tests may have indicated. Accordingly, many of these students still have difficulties accepting and reconciling their learning disabilities with the hundreds of messages that cumulatively influenced their sense of themselves. For example, a person who has been consistently and repeatedly called lazy and pressured to work harder may have difficulty requesting environmental modifications for exams. Thoughts emerged such as: "If I really work hard, I shouldn't need to take my exams on an untimed basis." Or, "If I really am smart, I wouldn't need to use books on tape. I should be able to read these books myself."

The process of molding all of these diverse experiences into the creation of academic success was slightly different for each person in the study. All twelve came from different types of families, although similarities existed. All were white, and many came from above average socioeconomic backgrounds. One pauses, therefore, to ask what happens to very bright students with learning disabilities who come from culturally different backgrounds or economically disadvantaged environments? Each person in this study had a mother who devoted herself to helping her child succeed. The strategies used by each mother varied, but the image was consistent for each child. This presence emerged regardless of whether the mother worked outside of the home and regardless of how many other children existed in the family. One may ask, therefore, what happens to children who do not have a similar source of constant support?

For persons in this study, a somewhat common journey existed in the process of creating academic success. This process is depicted in Figure 2. It is clear from this study that creating academic success depends upon the degree to which certain intervening experiences exist. At the beginning of the process, the nature and severity of the learning disability interact with, and to some extent, create the negative school experiences that each of these students encountered. Those who had severe learning difficulties or those who had learning problems that halted their forward progress (they did not learn to read) usually had the most negative school experiences. Those whose learning problems were less severe or noticeable usually suffered less, but again, all of these students encountered school experiences ranging from somewhat negative to severely negative.

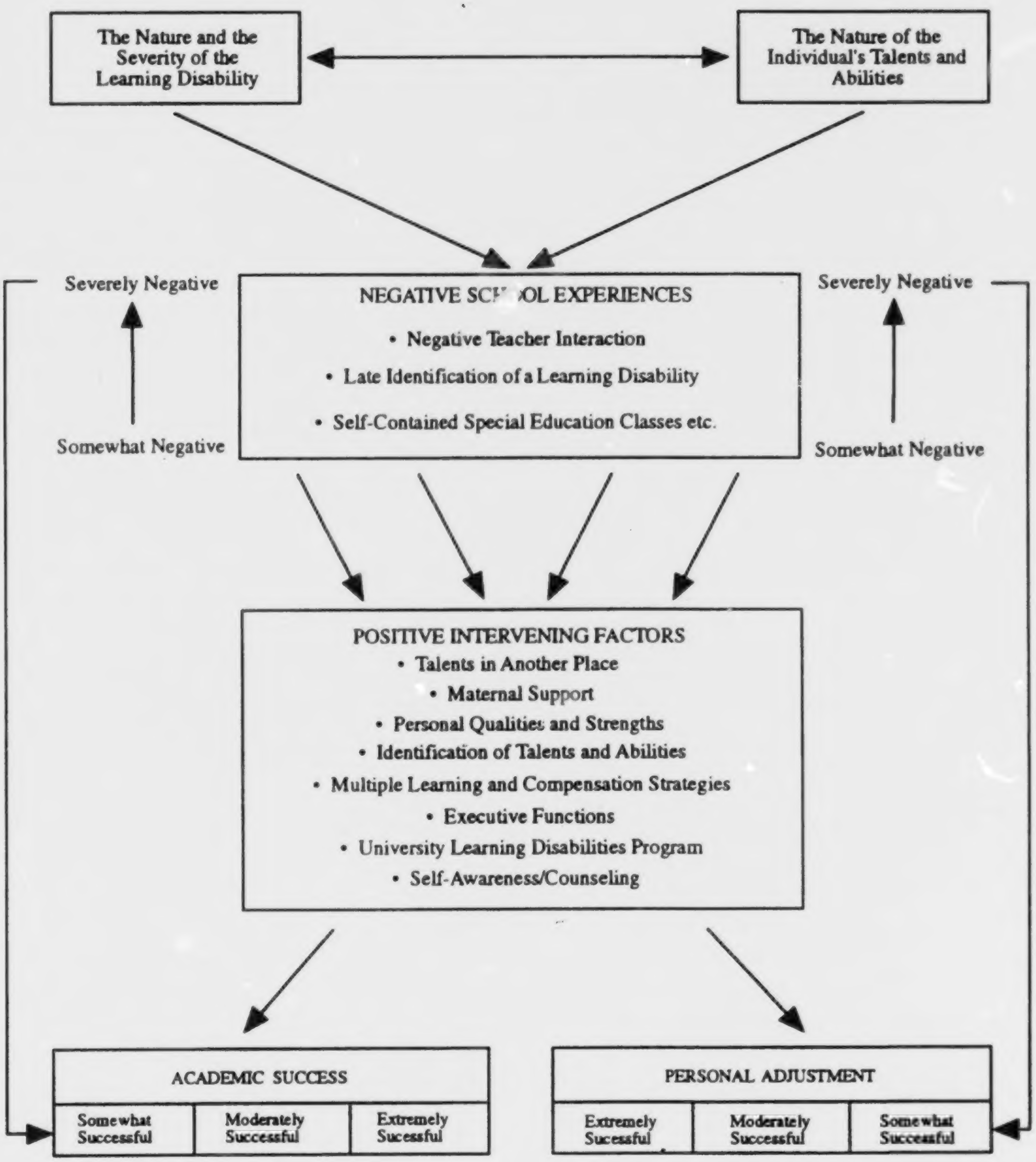

The Nature and the Severity of the Learning Disability
The Nature of the Individual's Talents and Abilities
Severely Negative
Somewhat Negative
NEGATIVE SCHOOL EXPERIENCES
• Negative Teacher Interaction
• Late Identification of a Learning Disability
• Self-Contained Special Education Classes etc.
Severely Negative
Somewhat Negative
POSITIVE INTERVENING FACTORS
• Talents in Another Place
• Maternal Support
• Personal Qualities and Strengths
• Identification of Talents and Abilities
• Multiple Learning and Compensation Strategies
• Executive Functions
• University Learning Disabilities Program
• Self-Awareness/Counseling
ACADEMIC SUCCESS
Somewhat Successful
Moderately Successful
Extremely Sucessful
PERSONAL ADJUSTMENT
Extremely Sucessful
Moderately Successful
Somewhat Successful

Figure 2. Pathways to Academic Success

The intervening factors listed in Figure 2 all played an integral role in the process of creating academic success. These factors include:

1. Talents exhibited in another place often provided these students with the belief in their ability to succeed in something that later resulted in achieving some degree of success.
2. The continued presence of maternal support—as one participant eloquently summarized: "My mother was always right beside me." This support eventually led these participants to gain the independence necessary to succeed on their own.
3. The personal qualities which participants possessed and parents described were traits which were born from adversity. These included: determination, perseverance, ethics of hard work, and sheer stubbornness. Occasionally, these strengths included those directly caused by painful experiences; for example, a desire to succeed may have resulted from the need to show those who erected roadblocks that one could succeed or to conquer the system that had attempted to destroy them.
4. The creation of a personal plan for academic success varied among participants, but always included common elements: multiple learning strategies, the use of carefully selected and individually necessary compensation strategies, and the integration of certain executive functions that guided decisions made and directions both taken and not taken.
5. The ability, finally, for these participants to be able to focus on developing their talents instead of focusing on their deficits. Their university experience often enabled them to select courses, and later majors, in which their considerable potential for talent could develop, or it enabled them to find the time and the environment to pursue an interest or hobby which had a positive influence on their life and their academic work.
6. The effect of a university or college program for students with learning disabilities was an integral part of the academic success experienced by the persons in this study. All who participated were extremely favorable about the presence of this program. While a mother was beside all participants throughout their lives, the university learning disability program provided a security for the subjects throughout their college years.
7. The self-awareness gained by some participants when forming a process of academic success was achieved as a result of their individual experiences and with the help of others, including parents, some educators, and some peers. For some of these students, other help was necessary in the form of counselors, psychologists, and psychiatrists who were necessary to overcome the fears and insecurities the subjects developed in their school experiences and early lives. The need for this professional help was usually most clearly felt by those who had experienced the most negative experiences: such as being placed for a prolonged period of time in a special education class in which most students were mentally retarded or spending a year with a teacher who denied recess privileges or gave detentions when a student couldn't complete work at the same pace as his/her peers who did not have a similar learning disability.

Those who experienced the most negative school experiences were often those who experienced less academic success on a scale ranging from somewhat to extremely successful. With regard to personal adjustment, it seems clear that those who recalled terrible experiences with great clarity are less successful in their own personal adjustment today.

Academic success is dependent upon hard work and many sacrifices. The persons in this study all were willing to work and make sacrifices for different reasons, some personal and some societal. This was difficult and many believe it will never end. One case study may help to illustrate one process used to create success in an academic setting.

Joe was a 21 year old junior who was a physics major at The University of Connecticut at the time of the study but has since dropped out. Joe's school experiences were similar in many ways to a number of other participants in this study. He never really had to work in school because he learned quickly. His verbal IQ was extremely high, yet problems in school began at a very early age. He had so many learning problems in the primary grades that he was placed in a self-contained special education classroom for students in grades two through six. During this time, Joe was instructed with students who were developmentally delayed and who had specific learning disabilities. He became severely depressed. About his time spent in this class, he recalled: "It was degrading. I was very resentful of it. I don't really remember that part of my life that well. I've blocked it out. I knew I was different than the other kids." Joe was retained in fifth grade while in the self-contained special education class and explained this by saying that he had become a disciplinary problem. He remembered incidents about his time in this class such as: "They used to send us out to recess with the mainstreamed kids. I remember being sort of alone and being made fun of. They called me retarded."

Joe's mother was a dedicated advocate for him during all of his school experiences. She faced constant problems caused by her own confusion about how to help her son and the mixed messages provided by school personnel. In parent-teacher conferences, she was told year after year that Joe was so bright that maybe he would outgrow his learning problems. She sought help from private school psychologists and was a constant presence in Joe's life. She helped him with his homework, monitored his school progress, requested that his teachers modify his assignments, hired tutors, argued with the school district when he was placed in low level classes, and was there to request help and provide support. Through her later efforts, a university with a program for students with learning disabilities was located.

After Joe was mainstreamed from his elementary self-contained special education class, he was given an IQ test in sixth grade. His scores were so high that school personnel considered him for the gifted program. Joe explains: "After my IQ test in grade six, they told me I had an IQ that made me eligible for the gifted program. So they gave me other tests (achievement tests) and told me that I didn't make it (the cut-off), but they told me not to feel bad because my learning disability caused me to score lower than normal people. So, I would have made it had I not been learning disabled." Joe's mother corroborates his memories about his failure to be placed in the gifted program, despite his very high IQ score. She relates her memory of the testing for placement in the program: "However, following the IQ test the school personnel told him 'Gee, sorry kid, you can't spell, you can't be gifted'." Joe's mother commented on this incident as one of the many times that both parents "responded strongly and negatively" toward the school.

The negative messages and constant mistakes perceived by Joe and others in this study made the interviewing process difficult, as it was often almost impossible to withhold judgment on the school personnel who so consistently erred with this group of students. Half of the twelve subjects in this study were retained one grade in school and all had repeated negative experiences.

Joe had difficulty both with reading and with handwriting. He was consistently placed in low level classes, and he did not have to study very hard at all in order to achieve Bs and Cs. During his secondary years, he attended school in a different district and his parents did not provide records that would have labeled him as having a learning disability. Joe's mother was not in favor of having the school personnel know that Joe had a learning disability because of the type of program in which he would be forced to participate. This program model was a self-contained class and Joe's previous experience had proven to him and his parents that this would not be challenging for him.

Accordingly, in both mathematics and science, he participated in advanced classes because his teachers did not know about his learning disability, for he diligently pursued all possible avenues of entry to these advanced classes. Because of his earlier negative elementary school experiences, no further services were requested from the public schools. In fact, when Joe's mother decided another assessment should be completed to qualify for admission to a college with a learning disability program, she sought help outside of the schools. Joe explains: "We did it privately. We were not going to do it from the schools because we all assumed if they knew I was learning disabled, I would be booted out of most of my advanced (math and science) classes."

At this point, Joe became extremely interested in physics because of the physics teacher he had during his junior year of high school. Joe loved physics and received an A+ in the class. "He [physics teacher] gave me an A+ because in his words, I knew more than he did about the subject." When asked how he had learned so much, Joe responded: "I read books on physics. I've read *A Brief History of Time*, *Coming of Age in the Milky Way*, and others."

Joe overcame a severe learning disability in order to delve into physics and read extremely complex topics. Although very involved in a university learning disabilities program, it is now questionable whether Joe will finish his degree as he has dropped out of the university subsequent to the study due to problems in courses he had to take outside of his major area because of university requirements. Despite extremely high abilities, Joe carries a great deal of anger about what happened to him in school, particularly in his elementary school years. "I am very resentful of my elementary school treatment. I am rather resentful of public education as a whole. I don't know how else I could feel, but I'm not mad at very many individuals." When asked if he can reverse his current situation, Joe responded: "Well, I'm working on it now. You see, I think I've finally gotten over a lot of the anger I had towards school, and I have begun to start studying. I have begun to be organized about my work." This optimistic statement, of course, did not reflect his subsequent actions as he was not successful in remaining in his university program.

Implications

Several implications emerged from this qualitative study of twelve people with learning disabilities who managed to succeed in an academic setting. The implications drawn from this study parallel findings by others who have studied this phenomenon (Baum, 1984, 1988; Torrance, 1982, 1992). Some implications of this research, however, have not been noted in other research studies and may signify the need for additional research.

The Need for the Development of Talents

Most of the participants in this study had special talents and abilities outside of school that were identified, nurtured, and developed by their parents possibly more than they might have been if school problems did not exist. Because these problems did exist, parents often looked for other areas in which their child could excel and spent considerable resources in helping to develop these talents. It was the development of these talents which often provided these students with the belief that they could excel in something if they worked hard at it, and if they could do something well, perhaps they could do better in school if they applied themselves and worked harder at it. This belief in themselves often caused them to work much harder at their academic work. Ironically, the hard work was necessary because of their learning disabilities, but it was the acquisition of this work ethic that caused many of these students to work harder and become extremely successful in college. Many other gifted students never have to work to excel in elementary or secondary school and consequently, never learn to work and may not achieve the same levels of success as have some of the participants of this study. However, this is not to infer that having a learning disability is a positive experience, for as has been stated earlier, several of these students ended up in need of counseling and have emotional difficulties to overcome. It is, rather, that in response to their learning disability, many of these participants learned the value of hard work and effort which later translated into academic success. And many of them first learned about work and effort through the development of talents not necessarily associated with academic success in school which were identified and nurtured by their parents.

The Need for High Ability Students With Learning Disabilities to Attend Colleges and Universities With Programs for Students With Learning Disabilities

It is clear from the data that these subjects in this study benefited in many ways from the program that they attended for students with learning disabilities at their university. The numerous examples of assistance, compensation strategies, and self-advocacy strategies that they encountered in this program eventually enabled these participants to be independent from other external sources of help, including their mothers.

The Need for Parent Training

The parents in this study, particularly the mothers, became advocates for their children. They sought help in numerous ways including going outside of the school to have assessment conducted and finding private, alternative schools for their children. Many of them expressed their frustration with the schools and with the lack of information about this population. Accordingly, it is necessary to try to have information about this and other studies conducted on this group provided through the media. Books and articles such as those summarized in Chapter 2 are currently available for parents. Researchers and educators have not been successful at spreading the word to parents through the popular press and through magazines that parents might read.

The Need for Appropriate Identification Procedures and Instrumentation for This Population

The results of this study may indicate that certain identification procedures used to place students in special education programs focusing on learning disabilities failed to include some students of high ability. It also appears that programs for high ability students may not provide access for bright students with learning disabilities. Since the term *learning disability* connotes so many different definitions and characteristics, we may question why those who score in higher ranges of intelligence or achievement tests, but who are clearly experiencing learning problems in school, so often fail to be identified for participation in programs for students with learning disabilities. Half of the participants in this study had learning problems that were severe enough to cause them to be retained for a grade in school, yet they were also denied entry to the learning disability program because they were "too bright" or their achievement scores were "too high," or, in one case, a program for this population did not exist.

From a review of these subjects' school and testing records administered by school psychologists in school districts, it also appears that their high ability allowed them to compensate for their learning problems on some of the instruments and tests commonly used to identify students as having a learning disability. Different results were sometimes attained by private psychologists, teams of professionals at hospitals, or the staff at the University Program for Students With Learning Disabilities (UPLD). This finding suggests that a reluctance may exist on the part of school personnel to perform a complete evaluation using appropriate instruments or a need for school personnel to explore the use of different instrumentation for high ability students with learning disabilities. It may be necessary to develop new instruments to help identify learning disabilities in this population of high ability students.

State policies mandating that students cannot be identified as having learning disabilities unless their achievement is two grade levels below their chronological age are also problematic. The presence of such policies in some states would have eliminated many of the participants in this study from identification and program entrance and certainly would eliminate other high ability students with learning disabilities from special education services. The learned compensation strategies and the effort expended to succeed caused many of the participants to achieve at or slightly below grade level, but this success was accompanied by numerous school problems and negative learning experiences. Policies such as these may continue to deny high ability students with learning disabilities the specialized services necessary to realize their potential.

An Examination of the Type and Quality of Special Education Programs Developed for High Ability Students With Learning Disabilities

The variability of the special education provisions for the participants in this study was surprising and unexpected. Some students were placed in self-contained classes with diverse students with special needs. This practice seemed to be ineffective for this population and actually created psychological problems for some participants. Often this type of placement is not currently used because of continued efforts to mainstream students with learning disabilities. In resource rooms where students are periodically scheduled, students with behavioral problems, learning disabilities, and developmental delays are often grouped at the same time and, in some cases, expected to work together. The mixture of students with different special education needs into one setting was problematic for students in this study. Their sense of self worth and their already fragile egos were further harmed, and their need for a quiet, orderly environment in which to do their work was often denied. While this arrangement may be cost effective and may be desirable for students with other exceptionalities, it was not the most appropriate learning environment for the participants in this study.

The curriculum used in the learning disability programs in which these subjects participated was also problematic. Specifically, four problems seemed to exist. First, no clear goals or objectives were obvious in the learning disability program. Accordingly, participants did not know what was expected of them. Second, a scattered portrayal of program activities seemed to be present. In some cases, participants were told to do their homework and request help if they needed it. In other cases, they were told to use the time to study for tests. No clear curriculum or program was evident to students, and continuity from year to year was not found. Third, participants who attended a program for students with learning disabilities indicated that the intervention was designed with remediation techniques as a solid program base. In other words, an assumption was made that students with learning disabilities were often below average, and no modifications were made for those who could master work more quickly than their peers. Evidence of repetition of activities over time was consistently provided by participants in this study. Fourth, the planned remediation program usually focused on content remediation, such as spelling and grammar rules, instead of the compensation or learning strategies needed to succeed. The learning strategies, for example, introduced in UPLD, according to the participants in this study, would have been enormously helpful had they been introduced during the elementary or secondary school program for learning disabled students. If teachers had used appropriate instructional and compensation strategies, students' learning would have been enhanced much earlier than actually occurred.

The Need for Enrichment Programs and Appropriate Challenge Levels

In this time of diminished funds for enrichment and/or gifted programs, the need for programs for high ability students is often forgotten, overshadowed by the importance of other critical issues such as remediation, drug education, safety issues, and other pressing concerns. The absence of enrichment programs will have a negative impact on all able students as all other school programs for this population focus on students' deficits, not on their strengths and interests. Without trained enrichment teachers or specialists for the needs of high ability students, it is doubtful that other staff or faculty will have the knowledge about how to provide for the needs of high ability students with learning disabilities. If trained personnel are working in a school, opportunities should exist for classroom teachers and special education teachers to request materials, exchange ideas, and work cooperatively to implement special programs for students with special needs who also demonstrate high abilities or potential. It is clear that students in this study would have benefited from the advice and input that could have been provided by a teacher with training and background in gifted education. Offering enrichment programs *based on students' strengths and interests* would have provided the students in this study with a more positive educational experience than the continued emphasis on remedial techniques. Advice related to the need for appropriate challenge for high potential students may have helped to avoid the placement of these students in classes or tracks that were not matched to their instructional needs.

Programs designed for high ability students with learning disabilities may help to improve self-concept and self-esteem of students as well as developing the potential talent that each student possesses (Baum, 1988). Programs for this population of students have been successfully developed using Renzulli's Enrichment Triad Model (1977) as the basis for focusing on students' strengths and interests.

The Need for Counseling Programs

It is quite clear that many of the students who participated in this study could have been helped by guidance counselors, teachers, or other professionals to understand the varied issues they encountered later in their academic program. Many of these issues could have been addressed in a counseling program that may have helped to prepare students to deal with their problems. A counseling program might have helped these students appropriately solve problems.

Wong (1986) and Baum (1984, 1988) indicate that little attention has been given to counseling strategies for students and parents or to educating parents and teachers about the problems associated with this population. Recently, however, Mendaglio (1993) has suggested a multidimensional approach for counseling gifted students with learning disabilities based on a number of factors: students' self-perceptions, their interaction with their parents, and emotional and interpersonal aspects of their experiences. For example, Mendaglio cites examples of students whose emotions are unexpressed for long periods of time who later "explode" at trivial comments from parents, giving the student a "Jekyl and Hyde" quality (p. 134). In the multidimensional approach suggested by Mendaglio, parents and teachers are integral to the counseling process. In fact, the younger the child, the more work is done with the adults. Individual or group counseling is used and various strategies are employed in this approach. A plan of action is developed for each individual situation with a focus of what can be done to improve the current situation by improving relationships, study habits, school achievement, and other aspects of a child's life. A plan for support of the implementation of the action plan is also employed in this approach.

The Need for Staff Development and Parent Training

Classroom teachers, counselors, special education teachers, and parents should be provided with opportunities for training about the identification and programming necessary to meet the needs of this population. Effective training could help to alert educators and parents to situations that may indicate a learning disability in a high ability student, such as a student with excellent verbal skills who is experiencing problems learning to read, or a student who seems very bright but who cannot seem to express herself/himself orally. Unfortunately, the wrong types of teacher assistance seem to have been provided. Considerable efforts were made, for example, to remediate the participants of this study on skills that they had not yet mastered *and which may no longer be as important* because of technology, such as word processors and their current interests. Staff development in how to identify and nurture talents as well as compensation strategies would help to address this concern.

Participants in this study could seldom choose topics to investigate or modes of learning that were uniquely suited to their own styles, preferences, or strengths. If opportunities could be provided for students to select areas of strengths or interests, these students may have had different experiences in school.

References

Aaron, P. G., & Phillips, S. (1986). A decade of research with dyslexic college students. *Annals of Dyslexia, 36*, 44-66.

Aaron, P. G., Phillips, S., & Larsen, S. (1988). Specific reading disability in historically famous persons. *Journal of Learning Disabilities, 21*(9), 523-538.

Adelman, K. A., & Adelman, H. S. (1987). Rodin, Patton, Edison, Wilson, Einstein: Were they really learning disabled? *Journal of Learning Disabilities, 20*(5), 270-279.

American College Testing Program. (1989). *Preliminary technical manual for the enhanced ACT assessment.* Iowa City, IA: Author.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.

Anderson, P. L. (1993). Issues in assessment and diagnosis. In L. Brinckerhoff, S. Shaw, & J. McGuire (Eds.), *Promoting postsecondary education for students with learning disabilities: A handbook for practitioners* (pp. 89-136). Austin, TX: PRO-ED.

Astin, A. W., Dey, E. L., Korn, W. S., & Riggs, E. R. (1991). *The American freshman: National norms for fall 1991.* Washington, DC: American Council on Education.

Baldwin, A. Y., & Wooster, J. (1977). *Baldwin identification matrix inservice kit for the identification of gifted and talented students.* Buffalo, NY: D. O. K. Publishers.

Baldwin, L. J., & Gargiulo, D. A. (1983). A model program for elementary-age learning-disabled/gifted youngsters. In L. H. Fox, L. Brody, & D. Tobin (Eds.), *Learning-disabled/gifted children: Identification and programming* (pp. 207-221). Baltimore: University Park Press.

Bandura, A. (1986). *Social foundations of thought and action.* Englewood Cliffs, NJ: Prentice-Hall.

Barritt, L., Bleeker, H., Beekman, T., & Mulderij, K. (1985). *Researching education practice.* Grand Forks, ND: University of North Dakota Press.

Barton, J., & Starnes, W. (1989). Identifying distinguishing characteristics of gifted and talented/learning disabled students. *Roeper Review, 12*(1), 23-29.

Baum, S. (1984). Meeting the needs of the learning disabled gifted students. *Roeper Review, 7*, 16-19.

Baum, S. (1985). *Learning disabled students with superior cognitive abilities: A validation study of descriptive behaviors.* Unpublished doctoral dissertation. Storrs, CT: University of Connecticut.

Baum, S. (1988). An enrichment program for gifted learning disabled students. *Gifted Child Quarterly, 32*(1), 226-230.

Baum, S., Emerick, L. J., Herman, G. N., & Dixon, J. (1989). Identification, programs, and enrichment for gifted learning disabled youth. *Roeper Review, 12*(1), 48-53.

Baum, S., & Kirschenbaum, R. (1984). Recognizing special talents in learning disabled students. *Teaching Exceptional Children, 16*(2), 92-98.

Baum, S., & Owen, S. V. (1988). High ability/learning disabled students: How are they different? *Gifted Child Quarterly, 32*(3), 321-326.

Baum, S., Owen, S. V., & Dixon, J. (1991). *To be gifted and learning disabled: From definitions to practical intervention strategies.* Mansfield Center, CT: Creative Learning Press.

Bloomer, R. H. (1978). *Bloomer Learning Test.* Scotland, CT: Brador Publications.

Bogdan, R. C., & Biklen, S. K. (1982). *Qualitative research for education: An introduction to theory and methods.* Boston: Allyn & Bacon.

Boodoo, G. M., Bradley, C. L., Frontera, R. L., Pitts, J. R., & Wright, L. P. (1989). A survey of procedures used for identifying gifted learning disabled children. *Gifted Child Quarterly, 33*(3), 110-114.

Borg, W. R., & Gall, M. D. (1989). *Educational research: An introduction.* (5th ed.). New York: Longman.

Bragstad, B. J., & Stumpf, S. M. (1987). *A guidebook for teaching: Study skills and motivation* (2nd ed.). Newton, MA: Allyn & Bacon.

Brinckerhoff, L. C., Shaw, S. F., & McGuire, J. M. (1993). *Promoting postsecondary education for students with learning disabilities: A handbook for practitioners.* Austin, TX: PRO-ED.

Brown, A. L. (1980). Megacognitive development and reading. In R. Spiro, B. Bruce, & W. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 453-481). Hillsdale, NJ: Erlbaum.

Brown, S. W., & Yakimowski, M. E. (1987). Intelligence scores of gifted students on the WISC-R. *Gifted Child Quarterly, 31,* 130-135.

Buchanan, M., & Wolf, J. S. (1986). A comprehensive study of learning disabled adults. *Journal of Learning Disabilities, 19*(1), 34-38.

Carlton, P. M., & Walkenshaw, D. (1991). Diagnosis of learning disabilities in postsecondary institutions. *Journal of Postsecondary Education and Disability, 9,* 197-206.

Cohen, J. (1983). Learning disabilities and the college student: Identification and diagnosis. In M. Sugar (Ed.), *Adolescent psychiatry: Developmental and clinical studies, Vol. 11.* Chicago: University of Chicago Press.

Cordell, A. S., & Cannon, T. (1985). Gifted kids can't always spell. *Academic Therapy, 21*(2), 143-152.

Cremins, M. A. (1988). *A rationale for reexamining definition, identification, and programs for the gifted-disabled/disadvantaged.* Washington, DC: U.S. Department of Education. (ERIC Document Reproduction Service No. ED 289284)

Daniels, P. R. (1983). *Teaching the learning-disabled/gifted child.* Rockville, MD: Aspen.

Daniels, P. R. (1986). Educator urges schools to identify plan for gifted/learning disabled. *Hilltop Spectrum, 4*(2), 1-6.

Davis, G. A., & Rimm, S. B. (1985). *Education of the gifted and talented.* Englewood Cliffs, NJ: Prentice-Hall.

Denckla, M. B. (1989). Executive function, the overlap zone between attention deficit hyperactivity disorder and learning disability. *International Pediatrics, 4*(2), 155-160.

Denckla, M. B. (1990, September). *Neurological and neural behavioral leases.* Paper presented at the United States Department of Education, Gifted and Talented Education Program Steering Group Meeting, Washington, DC.

Dixon, J. (1983). *The spatial child.* Springfield, IL: Charles C. Thomas.

Education for All Handicapped Children Act of 1975, Pub. L. No. 94-142, 89 Stat. 773 (1977).

Education Amendments of 1978, Pub. L. No. 95-561, 92 Stat. 2143 (1980).

Federal Register. (1977). U.S. Office of Education. Education of handicapped children. *Federal Register, 42*, 65082-85.

Fedoruk, G., & Yewchuk, C. (1986). The gifted learning disabled: identification and instruction. *Education Canada, 26*(4), 25-29.

Fox, L. H., Brody, L., & Tobin, D. (1983). *Learning-disabled/gifted children: Identification and programming.* Baltimore: University Park Press.

Fox, L. H., Tobin, D., & Schiffman, G. B. (1983). Adaptive methods and techniques for learning-disabled/gifted children. In L. H. Fox, L. Brody, & D. Tobin (Eds.), *Learning-disabled/gifted children* (pp. 223-242). Boston: University Park Press.

Frasier, M. M. (1990, April). *The equitable identification of gifted and talented children.* Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

French, J. N. (1982). The gifted learning disabled child: A challenge and some suggestions. *Roeper Review, 4*(3), 19-22.

Frey, C. (1986). How one school district programs for its gifted/LD population. *Hilltop Spectrum, 4*(2), 4-5.

Gardner, E. F., Callis, R., Merwin, J. C., & Rudman, H. C. (1983). *Stanford Test of Academic Skills* (2nd ed.). Cleveland, OH: Psychological Corporation.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Gerber, P. J., & Reiff, H. B. (1991). *Speaking for themselves: Ethnographic interviews with adults with learning disabilities.* Ann Arbor, MI: University of Michigan Press.

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory.* Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Hawthorne, New York: Aldine de Gruyter.

Goertzel, V., & Goertzel, M. G. (1962). *Cradles of eminence.* Boston: Little Brown.

Gowan, J. C. (1957). Dynamics of the underachievement of gifted students. *Exceptional Children, 24*, 98-102.

Gregg, N., & Hoy, C. (1990). Identifying the learning disabled. *Journal of College Admissions, 129,* 30-33.

Guba, E. G. (1978). *Toward a methodology of naturalistic inquiry in educational evaluation.* Los Angeles: University of California Press.

Guilford, J. P. (1967). *The nature of human intelligence.* New York: McGraw-Hill.

Gunderson, C. W., Maesch, C., & Rees, J. W. (1987). The gifted/learning disabled student. *Gifted Child Quarterly, 31*(4), 158-160.

Hallahan, D. P., & Bryan, T. (1981). Learning disabilities. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of special education* (pp. 141-164). Englewood Cliffs, NJ: Prentice Hall.

Hallahan, D. P., & Kauffman, J. M. (1988). *Exceptional children: Introduction to special education* (4th ed). Englewood Cliffs, NJ: Prentice Hall.

Hammill, D. D. (1990). On defining learning disabilities: An emerging consensus. *Journal of Learning Disabilities, 23*(2), 74-84.

Hansford, S. J., Whitmore, J. R., Kraynak, A. R., & Wingenbach, N. G. (1987). *Intellectually gifted learning disabled students: A special study.* Reston, VA: Council for Exceptional Children. (ERIC Document Reproduction Service No. ED 287 242)

Hardman, M. L., Drew, C. J., Egan, M. W., & Wolf, B. (1993). *Human exceptionality: Society, school, and family.* Boston: Allyn & Bacon.

Henderson, C. (1992). *College freshmen with disabilities: A statistical profile.* Washington, DC: HEATH Resource Center.

Heyward, Lawton, & Associates. (Eds.). (1991). Documenting the need for academic adjustments. *Disability Accommodation Digest, 1*(3), 3.

Hildreth, G. (1966). *Introduction to the gifted.* New York: McGraw Hill.

Hokanson, D. T., & Jospe, M. (1976). *The search for cognitive giftedness in exceptional children.* New Haven, CT: Project SEARCH.

Hollingworth, L. S. (1942). *Children above 180 IQ.* Yonkers-on-Hudson, NY: World Books.

Jacobs, J. E., & Paris, S. G. (1987). Children's metacognition about reading: Issues in definition, measurement, and instruction. *Educational Psychologist, 22*(3-4), 255-278.

Jacobson, V. (1984). *The gifted learning disabled.* Calumer, IN: Purdue University. (ERIC Document Reproduction Service No. ED 254 981)

Jarrow, J. (1986). *Integration of individuals with disabilities in higher education.* Washington, DC: The Catholic University of America, DATA Institute.

Jick, T. D. (1983). Mixing qualitative and quantitative methods: Triangulation in action. In J. Van Maanen, (Ed.), *Qualitative methodology* (pp. 135-148). Beverly Hills, CA: Sage Publications.

Johnson, D. J. (1987). Assessment issues in learning disabilities research. In S. Vaughn & C. S. Bos (Eds.), *Research in learning disabilities* (pp. 141-149). Austin, TX: PRO-ED.

Kass, C. E. (1977). Identification of learning disability (Dyssymbolia). *Journal of Learning Disabilities, 10*(7), 36-43.

Kirk, S. A. (1963). Behavioral diagnosis and remediation of learning disabilities. In *Proceedings of the Annual Conference on Exploration in the Problems of the Perceptually Handicapped Child* (pp. 1-7). Evanston, IL: Fund for Perceptually Handicapped Children.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage Publications.

Litt, V., & McGuire, J. M. (1989). *Continuum of services.* Storrs, CT: The University of Connecticut Program for College Students with Learning Disabilities (UPLD), A. J. Pappanikou Center on Special Education and Rehabilitation.

Maker, C. J. (1977). *Providing programs for the gifted handicapped.* Reston, VA: The Council for Exceptional Children.

Maker, C. J. (1978). *The self-perceptions of successful handicapped scientists.* (Grant No. G00-7701[905]). Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education, Bureau of the Education for the Handicapped.

Mangrum, C. T., & Strichart, S. S. (1988). *College and the learning disabled* (2nd Ed.). Philadelphia: Grune and Stratton.

Mangrum, C. T., & Strichart, S. S. (Eds.). (1992). *Peterson's colleges with programs for students with learning disabilities* (3rd Ed.). Princeton, NJ: Peterson's Guides.

Marland, S. P., Jr. (1972). *Education of the gifted and talented.* Vol. I, Report to the Congress of the United States by the U.S. Commissioner of Education. Washington, DC: U.S. Government Printing Office.

Marshall, C., & Rossman, G. (1989). *Designing qualitative research.* New York: Sage Publications.

Masters, L. F., & Mori, A. A. (1986). *Teaching secondary students with mild learning and behavior problems.* Rockville, MD: Aspen Publications.

Mauser, A. J. (1981). Programming strategies for pupils with disabilities who are gifted. *Rehabilitation Literature, 42*, 270-275.

McCleary, I. D., Hardman, M. L., & Thomas, D. (1990). International special education. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education: Research and studies* (pp. 608-615). New York: Pergamon Press.

McCue, P. M., Shelly, C., & Goldstein, G. (1986). Intellectual, academic, and neuropsychological performance levels in learning-disabled adults. *Journal of Learning Disabilities, 19*(4), 233-236.

McGuire, J. M. (1988). Self-advocacy: A critical skill for college-bound students and learning disabilities. *The Collaborative Educator*, *2*(7), 11.

McGuire, J. M., Hall, D., & Litt, A. V. (1991). A field-based study of the direct service needs of college students with learning disabilities. *Journal of College Student Development*, *32*, 101-108.

McGuire, J. M., & Shaw, S. F. (1987). A decision-making process for the college-bound student. Matching learner, institution, and support program. *Learning Disability Quarterly, 10*(2), 106-111.

McGuire, J. M., & Shaw, S. F. (Eds.). (1989). *Resource guide of support services for students with learning disabilities in Connecticut colleges and universities.* Storrs, CT: The University of Connecticut, A. J. Pappanikou Center on Special Education and Rehabilitation.

Meisgeier, C., Meisgeier, C., & Werblo, D. (1978). Factors compounding the handicapping of some gifted children. *Gifted Child Quarterly*, *22*(3), 325-331.

Mendaglio, S. (1993). Counseling gifted learning disabled: Individual and group counseling techniques. In L. K. Silverman (Ed.), *Counseling the gifted and talented* (pp. 131-150). Denver, CO: Love Publishing.

Mercer, C. (1987). Beyond traditional assessment. In S. Vaughn & C. S. Bos (Eds.), *Research in learning disabilities* (pp. 153-165). Austin, TX: PRO-ED.

Mercer, C., & Mercer, A. (1989). *Teaching students with learning problems.* Columbus, OH: Charles E. Merrill.

Meyen, E. L. (1982). *Exceptional children in today's children: An alternative resource book.* Denver, CO: Love Publishing.

Miles, M. B., & Huberman, A. M. (1984). Drawing valid meaning from qualitative data: Toward a shared craft. *Educational Researcher, 13*(5), 20-30.

Miller, R. V., Rzonca, C., & Snider, B. (1991). Variables related to the type of postsecondary education experience chosen by young adults with learning disabilities. *Journal of Learning Disabilities, 24*(3), 188-191.

Mindell, P. (1982). The gifted dyslexic: A case study with theoretical and educational implications. *Roeper Review, 4*(3), 22-23.

Minner, S. (1990). Teacher evaluations of case descriptions of LD gifted children. *Gifted Child Quarterly, 34*(1), 37-39.

Myers, P. I., & Hammill, D. D. (1982). *Learning disabilities: Basic concepts, assessment practices, and instructional strategies.* Austin, TX: Pro-Ed.

National Joint Committee on Learning Disabilities. (1988). [Letter to NJCLD member organizations]. Towson, MD: Author.

Norlander, K. A., Shaw, S. F., & McGuire, J. M. (1990). Competencies of postsecondary education personnel serving students with learning disabilities. *Journal of Learning Disabilities, 23*(7), 426-432.

Orton, S. (1937). *Reading, writing, and speech problems in children.* New York: W. W. Norton.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage Publications.

Prater, G., & Minner, S. (1986). *Identification of atypical gifted children* (Tech. Rep. No. 2). Murray, KY: Murray State University, Department of Special Education.

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press.

Renzulli, J. S. (1978). What makes giftedness? *Phi Delta Kappan, 60*(3), 180-184, 261.

Renzulli, J. S., Reis, S. M., & Smith, L. (1981). *Revolving door identification model.* Mansfield Center, CT: Creative Learning Press.

Rosner, S. L., & Seymour, J. (1983). The gifted child with a learning disability: Clinical evidence. In L. Fox, L. Brody, & D. Tobin (Eds.), *Learning disabled/gifted children: Identification and programming* (pp. 77-100). Baltimore: University Park Press.

Sah, A., & Borland, J. H. (1989). The effects of a structured home plan on the home and school behaviors of gifted learning-disabled students with deficits in organizational skills. *Roeper Review, 12*(1), 54-57.

Schiff, M., Kaufman, A. S., & Kaufman, N. L. (1981). Scatter analysis of WISC-R profiles for learning disabled children with superior intelligence. *Journal of Learning Disabilities, 14*(7), 400-404.

Schultz, J. B., Carpenter, C. D., & Turnbull, A. P. (1991). *Mainstreaming exceptional students: A guide for classroom teachers*. Boston: Allyn & Bacon.

Scruggs, T. E., Mastropieri, M. A., & Cohn, S. J. (1982). *Identification, assessment, and educational programming for a gifted but poorly achieving Indian child.* (ERIC Document Reproduction Service No. ED 234574)

Shaw, S. F., Brinckerhoff, L. C., Kistler, J. K., & McGuire, J. M. (1992). Preparing students with learning disabilities for postsecondary education: Issues and future needs. *Learning Disabilities*, *2*(1), 21-26.

Shaw, S. F., McGuire, J. M., & Brinckerhoff, L. C. (1993). College and university programming. In P. J. Gerber & H. B. Reiff (Eds.), *Adults with learning disabilities*. Andover, MA: Andover Medical Publishers.

Shore, B. M., & Dover, A. C. (1987). Metacognition, intelligence and giftedness. *Gifted Child Quarterly*, *31*(1), 37-39.

Silverman, L. K. (1989). Invisible gifts, invisible handicaps. *Roeper Review*, *12*(1), 37-42.

Spradley, J. P. (1979). *The ethnographic interview*. New York: Holt, Rinehart and Winston.

Starnes, W., Ginevan, J., Stokes, L., & Barton, J. (1988, March). *A study in the identification, differential diagnosis, and remediation of underachieving highly able students*. Paper presented at the Annual Convention of the Council for Exceptional Children, Washington, DC.

Sternberg, R. J. (1981). A componential theory of intellectual giftedness. *Gifted Child Quarterly*, *25*(2), 86-93.

Sternberg, R. J., & Davidson, J. E. (Eds.). (1986). *Conceptions of giftedness*. New York: Cambridge University Press.

Strauss, A. L. (1987). *Qualitative analysis for social scientists*. New York: Cambridge University Press.

Strauss, A. L., & Corbin, J. (1990). *Basics of qualitative research*. Newbury Park, CA: Sage Publications.

Strauss, A., & Lehtinen, L. (1947). *Psychopathology of the brain injured child*. New York: Grune & Stratton.

Stuss, D. T., & Benson, D. F. (1986). *The frontal lobes*. New York: Raven Press.

Suter, D., & Wolf, J. (1987). Issues in the identification and programming of the gifted/learning disabled child. *Journal for the Education of the Gifted*, *10*(3), 227-237.

Tannenbaum, A., & Baldwin, L. (1983). Giftedness and learning disability: A paradoxical combination. In L. Fox, L. Brody, & D. Tobin (Eds.), *Learning disabled/gifted children* (pp. 11-36). Boston: University Park Press.

Taylor, H. G. (1989). Learning disabilities. In E. J. Mash & R. Barkley (Eds.), *Treatment of childhood disorders* (pp. 347-380). New York: Guilford Press.

Terman, L. M. (1959). *Genetic studies of genius (Vol. V).* Palo Alto, CA: Stanford University Press.

Terman, L. M., & Oden, M. H. (1947). *The gifted child grows up.* Stanford, CA: Stanford University Press.

Thompson, L. J. (1971). Language disabilities in men of eminence. *Journal of Learning Disabilities, 4*, 34-45.

Torrance, E. P. (1982). Growing up creatively gifted with learning disabilities. In W. Cruickshank & J. W. Lerner (Eds.), *Coming of Age* (pp. 24-35). Syracuse, NY: Syracuse University Press.

Torrance, E. P. (1992). Creatively gifted, learning disabled individuals. *The Educational Forum, 56*, 399-404.

Udall, A. J., & Maker, C. J. (1983). A pilot program for elementary-age learning disabled gifted students. In L. H. Fox, L. Brody, & D. Tobin (Eds.), *Learning-disabled/gifted children* (pp. 223-242). Boston: University Park Press.

Vail, P. (1987). *Smart kids with school problems.* New York: E. P. Dutton

Van Maanen, J. (1983). Reclaiming qualitative research methods for organizational research. In J. Van Maanen (Ed.), *Qualitative methodology* (pp. 9-18). Beverly Hills, CA: Sage Publications.

VanTassel-Baska, J. (1984). The talent search as an identification mode. *Gifted Child Quarterly, 28*, 172-176.

Vantour, J. A. C. (1976). Discovering and motivating the artistically gifted LD child. *Teaching Exceptional Children, 8*(2), 92-96.

Vaughn, S. (1989). Gifted learning disabilities: Is it such a bright idea? *Learning Disabilities Focus, 4*(2), 123-126.

Waldron, K. A., Saphire, D. G., & Rosenblum, S. A. (1987). Learning disabilities and giftedness: Identification based on self-concept, behavior, and academic patterns. *Journal of Learning Disabilities, 20*(7), 422-432.

Wallach, M. A. (1976). Tests tell us little about talent. *American Scientist, 64*, 57.

Webb, J. T., Meckstroth, E. A., & Tolan, S. S. (1982). *Guiding the gifted child.* Columbus, OH: Ohio Psychology Publishing Company.

Wechsler, D. (1981). *Wechsler Adult Intelligence Scale–Revised.* New York: Psychological Corporation.

Weill, M. P. (1987). Gifted/Learning disabled students: Their potential may be buried treasure. *The Clearing House, 60*, 341-343.

West, T. G. (1991). *In the mind's eye: Visual thinkers, gifted people with learning difficulties, computer images, and the ironies of creativity.* Buffalo, NY: Prometheus Books.

West, T. G. (1992). A future of reversals: Dyslexic talents in a world of computer visualization. *Annals of Dyslexia, 42*, 124-139.

Whitmore, J. (1980). *Giftedness, conflict, and underachievement.* Boston: Allyn & Bacon.

Whitmore, J. (1986). Conceptualizing the issue of underserved populations of gifted students. *Journal for the Education of the Gifted, 10*(3), 141-153.

Whitmore, J. R., & Maker, J. (1985). *Intellectual giftedness in disabled persons.* Rockville, MD: Aspen Publications.

Williams, K. (1988). The learning disabled gifted: An unmet challenge. *Gifted Child Today,* May-June, pp. 17-18.

Wingenbach, N. (1985). Chapter reaction. In J. R.Whitmore & C. J. Maker (Eds.), *Intellectual giftedness in disabled persons.* Rockville, MD: Aspen Publications.

Witty, P. A. (Ed.). (1951). *The Gifted Child.* Boston: Heath.

Witty, P. (1958). Who are the gifted? In N. B. Henry (Ed.), *Education for the gifted. The fifty-seventh yearbook of the National Society for the Study of Education, Part II.* Chicago: The University of Chicago Press.

Wolf, J., & Gygi, J. (1981). Learning disabled and gifted: Success or failure? *Journal for the Education of the Gifted, 4*(3), 199-206.

Wong, B. (1986). Metacognition and special education: A review of a view. *Journal of Special Education, 20*(1), 9-29.

Yewchuk, C. (1983). Learning disabled/gifted children: Characteristic features. *Mental Retardation and Learning Disability Bulletin, 11*(3), 128-133.

Yewchuk, C. (1986). Issues in identification of gifted/learning disabled children. *British Columbia Journal of Special Education, 10*(3), 201-209.

Ysseldyke, J. E., & Algozzine, B. (1983). LD or not LD: That's not the question. *Journal of Learning Disabilities, 16*(1), 29-31.

Appendix A

Interview Protocol,
Subject Questionnaire,
Parent Interview Questions

Interview Protocol

Areas

Introduction:

1. Age
2. School activities
3. Family members
4. Hobbies, interests, jobs

School:

1. Describe present school/college or work program.
2. What aspects of school/college do you value?
3. Describe yourself as a student. School/college.
4. How would a peer describe you?
5. History or academic performance? School/college.
6. Describe classes you like. School/college. Why? Also classes you did not like. Why?
7. When were you identified as learning disabled? School/college.
8. What type of learning disability? School/college.
9. Were you ever identified as gifted/talented? School/college.
10. Did you think you were smart? School/college. Did any of your friends think you were smart?
11. Describe reactions of teachers, parents, and peers to your learning disability.
12. What coping strategies did you learn to overcome your learning disability? School/college.
13. What other strategies did you use to be successful in school/college?
14. Do you think you have any special abilities? What do you do differently when you're studying here at the University of Connecticut than what you did in high school?

Family:

1. Influence of parents, siblings during school/college.
2. Describe activities at home.
3. What have been your parents' expectations regarding performance in school/college?
4. How does your family hinder, help you with your learning disability?
5. Describe family situation, reactions, behaviors during periods of identification as being learned disabled.

School/Personnel Effects:

1. Did your teachers help? School/college.
2. What important events, individuals made a difference in school/college? In what way?
3. What can you tell me that would explain what happened during periods of being labeled gifted/talented or learning disabled? School/college.
4. Did a guidance counselor help you? How? When? School/college.
5. Did a school psychologist help you? How? When? School/college.
6. Were you concerned about being labeled learning disabled? What effects did this have on school/college?

Subject Questionnaire

Instruction:

Please answer the following questions before you are interviewed by the researcher. Your answers will assist us in conducting a study of those factors which may affect your academic performance in school. Please feel free to add any additional information which may be useful in giving a clear picture of you and your experiences in school. All information will be treated as STRICTLY CONFIDENTIAL.

This questionnaire may be returned to:

Sally M. Reis
Department of Educational Psychology
The University of Connecticut
Box U-7, 362 Fairfield Road
Storrs, CT 06269

Your Name ______________________________

Age ____________ Sex ____________ Date of Birth ____________

Educational level ______________________________

Number of semesters completed ______________________________

College or school in which you are enrolled ______________________________

(Responses to the following questions may be continued on the back of these pages.)

1. Describe your present university program (courses, classes, etc.,)

____

____

____

____

2. Were you identified as having a learning disability in school? If so, at what grade level?

____

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____

3. What was the nature of the learning disability?

4. Were you ever identified as gifted or did you ever think that you were 'smart' in certain areas?

5. Have you ever experienced a period of time during which you did not do well in school? If so, please describe this period of time.

6. What events and/or persons have had the greatest positive influence on your performance as a student? How did these events and persons enable you to be a better student?

7. What events and/or persons have had the greatest negative influence on your performance in school? How did these cause you to not do well in school?

____

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____

____

8. What are your career goals?

____

____

____

____

Thank you for answering these questions! We'll be in touch soon to arrange an interview at your convenience.

Parent Interview Questions

I.

Daughter/Son's Name ______________________________

Sex __________ Date of Birth ______________ Grade __________

Telephone ______________________________

Father's Name ______________________________

Birthplace ______________________________

Date of Birth ______________ Occupation ______________

Level of Education Completed ______________________________

Mother's Name ______________________________

Birthplace ______________________________

Date of Birth ______________ Occupation ______________

Level of Education Completed ______________________________

Siblings	Date of Birth

II.

(Responses to the following questions may be continued on the back of these pages.)

1. Describe incidents or other evidence which might indicate the advanced intellectual ability of your daughter/son.

2. Describe incidents or other evidence which involves your daughter/son's identification as learning disabled. When was your daughter/son identified as learning disabled? What type of learning disability? Describe school/college experiences, negative/positive.

3. Is your daughter/son presently above average in academics in school/college? If yes, please describe your daughter/son's present educational situation.

4. What factors do you believe motivate your daughter/son to do well academically?

5. Who helped to identify your son/daughter as learning disabled?

6. Did you also know that your daughter/son was very bright?

7. In your opinion, what has been the role of the family in influencing the level of academic performance of your daughter/son?

8. Was there ever a period in which your daughter/son's academic performance was not satisfactory? If your response is yes, please describe the situation at that time.

9. What factors do you believe contributed to this period of below-average performance in school/college, and what factors helped to reverse this performance (i.e., teacher, counselor, learning disability specialist?)

10. Additional comments or information concerning your daughter/son's academic performance and his/her identification as learning disabled or high ability?

11. Are there any member of your family (e.g., parent, grandparent, aunt/uncle) who had a history of learning problems? If yes, please describe.

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